DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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CALENDAR FOR APRIL.

"Now the golden morn aloft
Waves her dew-bespangled wing;
With vermeil cheek, and whisper soft,
She woos the tardy Spring;
Till *April* starts, and calls around
The sleeping fragrance from the ground."

EEPING April has come, and "hath put a spirit of youth in every thing." Not so rough in her moods as March, but still more uncertain. She "is at once the most juvenile of the months, and the most feminine—never knowing her own mind for a day together. Fickle as a fond maiden with her first lover:—coying it with the young sun till he withdraws his beams from her, and then weeping till he gets them back again." But April is a sweet month, after all. It is a month full of promises:—every sweet breath from the South, and every gentle shower, is a new promise of glad and beautiful things; and then what a charming *hope* remains. And with all this promise for the future, April brings the early flowers and birds, with their fragrance and their song. What is all the "pride, pomp and circumstance of glorious" Autumn, compared with these! Somebody has compared life to a "Fitful April day"—we wish it were no worse, for most of the April "fits" are very pleasant ones indeed.

But we will let the poets take care of themselves, while we look a little after the

PLOWING.—There are two or three general rules to be observed in this operation which are so essential to success, that we hope our *young* readers, at least, will give them so much attention as not to fall into error. The first is, not to touch the land until it is in a fit condition to be plowed, even though the season may be a little late for this work. If the proper drainage and evaporation has not taken place, the workman will find that the furrow turned over has been pressed into a kind of mortar, so that when the harrow is applied, instead of the furrow falling into a fine tilth it breaks into lumps, which become baked and hard, impervious to air and water, and likely to remain so through the entire season. These not only mar the appearance of the field, but are in the way of the cultivator and hoe, and constantly roll upon the young and tender plants and destroy them.

But another error is, plowing *too shallow*, for the sake of doing the work quick, and pressing forward the spring work rapidly. This is done at the expense of much comfort all through the remainder of the season, and a considerable abbreviation of the crop, whatever it may be. Nature, if aided a little by giving the surplus water an opportunity to run off, will bring all lands into a proper condition to be plowed and planted, through her powerful alembics, the sun and air, quicker and better than anything that man can do for it. In this important operation, bring in the *head* to the aid of the hands, and the work will prosper better.

SOWING GRAIN.—Sow early—that is, as soon as the soil is in condition,—then your crops get a good start before drouths come on; thus the roots of the plants are struck deep, are widely spread and will perfect their seeds.

CARROTS.—Sow early, and disregard the old notion that by sowing late you save a good deal of weeding; that doctrine has lost many a crop of carrots. See some remarks on the cultivation of this root under the head of "Extracts and Replies."

PEAS.—They laugh at Jack Frost, and may be put in early—especially if you want a crop in June.

Fences.—Weak fences are something like weak resolutions—the former will not keep off vicious cattle, nor the latter vicious propensities. See that they are all stout and strong, in good season, before the animals have found out a weak spot.

Fruit Trees.—All that are intended to be transplanted should be taken up before a bud or leaf starts, set in by the heels, and kept until the ground is ready to receive them. Great care must be observed not to injure the roots, stem or branches. Set no more than you can put down in the most thorough manner, and find time to take care of afterwards.

The Garden.—Clean up the strawberry-beds; cut out the old wood from the raspberry bushes, and tie those which remain to stakes or trellises, and look after the currant and gooseberry bushes.

The Flower Garden.—A few—if only a very few—should be about every farm-house. They are pleasant to the children, and to the traveller as he passes; and it will promote your own good nature to see others happy.

The Door Yard.—It is always a bad sign to see the wood pile scattered about the yard, mingled with old wheels, worn-out baskets, bones, horns, parts of wagons, and wrecks of old carriages. A green, clean, smooth lawn is always attractive and pleasant, and is highly suggestive of the same good order in-doors.

April is a most important month to the farmer, and all its duties should be performed with fidelity and promptness.

FIRST ANNUAL REPORT

OF THE SECRETARY OF THE BOARD OF AGRICULTURE.

BY C. L. FLINT.

Last week we briefly alluded to this report, and said we thought it a document of more value than any that has preceded it in this State, on agricultural subjects. A more careful examination fully sustains the opinion then expressed. No other State publication has ever attempted to collate from the several towns important information in relation to the stock, the grass and grain crops, pasturage, woodland, the fruit crops, renovation of lands, manures, farm labor, profits of farming, points of excellence in the different breeds of cattle, &c. &c.

In order to draw out the information desired on these several subjects, together with many others which we have not enumerated, the Secretary prepared a circular, containing some 28 questions, a copy of which he sent to every town in the State on the first of September last, and to such individual as he supposed was interested in the subject and would give full and correct answers to the questions propounded. In many instances his anticipations were fully realized; his questions not only being answered, but a brief sketch of the condition of agriculture in the town given, with such manifestations of a decided interest in the cause as will rapidly promote its interests. About two-thirds of all the towns in the State were heard from, and it is mainly from these materials that he has given us the interesting details of the condition of agriculture in the several counties.

It was our intention to extract freely from this report, which we shall hereafter do, in relation to particular subjects; but on recurring to the first part of the report in which the Secretary reviews the past and present condition of the agriculture of Massachusetts, we find the whole so full of interest and so applicable to all New England, as well as Massachusetts, that we shall give the first fifteen or twenty pages, entire. We believe we have no reader but would be glad to see the whole, and as only a comparatively small number of copies of the report is printed by the State, we shall draw upon its pages more liberally for that reason.

Aside, however, from the aid afforded by these returns, it will be evident to the reader that the Secretary has given all the subjects which he has discussed much earnest thought and investigation. Indulging in no crotchets or fanciful speculations of his own, he has given a mass of valuable and reliable facts which will strongly tend to increase the products of the State and thereby add materially to its wealth. We wish a copy of the report could be placed in the hands of each farmer of the State.

For the New England Farmer.

REMEDY FOR POTATO ROT.

Mr. Editor:—The best remedy I have ever found for the disease that has proved so injurious to the potato crop, is to plant a kind of potato that is *never* affected with the disease. This I have done successfully for the last ten years, not losing a single crop, nor a single bushel, during the whole time. The kind I used was introduced into this town by my father, some 20 or 30 years ago. It is a black potato, much like the black chenango. It is of a good quality, take the season through, especially from April to August. It is very productive, and has given me at the rate of some 350 bushels to the acre. I plant several kinds for the sake of variety, but all have been more or less subject to the rot, some entirely destroyed by it, except this. I have, therefore, come to regard it as the only reliable kind; and therefore plant the principal part of this sort, so as to be sure of a crop, whatever may be the fate of other varieties. I have now about 200 bushels on hand, perfectly sound and good.

I make this communication because many farmers may not know that there is a kind of potato, and that a very good one, which they can always safely and profitably raise. No one can say, of course, that they never will rot, but my own experience is, they never have.

I am yours truly, Amasa Walker.

North Brookfield, March 1, 1854.

For the New England Farmer.

IS IT PROFITABLE TO FATTEN SWINE IN NEW ENGLAND.

The question of the profit of fattening swine in the New England States was suggested by reading an extract in the Monthly No. of the *New England Farmer* for January, 1854, taken from the *Ohio Cultivator*, and detailing the results of an experiment projected in Ohio, to determine how much pork a bushel of corn will make. It appears from the extract, that S. B. Anderson weighed off 100 thrifty hogs, placed them in an enclosure, fed them 100 days with as much corn as they would eat, and found that they consumed, on an average, 100 bushels every six days, and made an average gross increase, per hog, for the 100 days, of 175 lbs., or at the rate of 1¾ lb. each, per day; that 1 bushel of corn made a gross increase of 10½ lbs. of pork, or, by throwing off 1-5, to come at the net weight, that 1 bushel of corn made 8 2-5 lbs. of pork, net. It further appears, that if 1 bushel of corn makes 8 2-5 lbs. of pork, then—

When pork sells for	3c	per lb.,	corn bring	25c	per bu.	
"	"	4	"	"	33	"
"	"	5	"	"	42	"
"	"	6	"	"	50	"

The extract does not state the condition of the corn fed to the 100 hogs, but I suppose it was fed whole and uncooked, and perhaps on the ear. Whether or not, on the basis of the above table of prices, it is profitable to Ohio farmers to feed corn to hogs, is more than I know.

Here in New England, it is not profitable to fatten swine on clear corn, unground and uncooked, nor in any form, if the system of feeding is a loose and careless one; but I shall attempt to show that with proper management, we can make pork at a profit.

Numerous interesting accurate experiments have been made in various parts of the country, to determine the difference between cooked and uncooked food for fattening swine, and resulting greatly in favor of the cooked food. The late Mr. Colman made a very valuable communication to the Transactions of the Essex County Agricultural Society, detailing various experiments of his in fattening pigs upon Indian meal boiled with water. Here are the results of three of his experiments:

2 pigs in 18 days	consumed	6	bu.	corn, and	gained	93	lbs.,	gross
2 "	20	"	4½	"	"	104	"	
4 "	19	"	7½	"	"	103	"	
Total of grain consumed		18	bu.	Total gain,		300	lbs.	

Averaging the three lot of pigs, the gross increase was 16⅔ lbs. One of the pigs in the first lot was killed at the expiration of the experiment, and his net dressed weight was found to be 1-5 the less than his gross live weight. If then we deduct 1-5 from the average gross gain of the 8 pigs, we find their net gain to have been 13⅓ lbs., or that 1 bushel of corn, ground into meal and the meal cooked, made 13⅓ lbs. of pork, net.

The late Mr. Phinney, of Lexington, Mass., of great and varied experience in agricultural matters, was celebrated, among other things, for his superior breeds of swine, and mode of rearing and fattening them. He gave several communications to the public, showing that 1 bushel of corn, fed in the form of cooked meal, will make from 12 to 15 lbs. of pork, net weight. In conversations with him, he frequently related to me how he made this amount of pork with a bushel of corn, and I have no doubt but he knew, with great accuracy, whereof he affirmed. I have now before me the records of experiments made by several other persons, and they show that 1 bushel of corn, ground and cooked, will make all the way from 12 to 16 lbs. of pork, net.

Taking the lower estimate, if 1 bushel of corn makes 12 lbs. of pork, then—

When pork sells for	6c	per lb.,	corn brings	72c	per bu.	
"	"	6½	"	"	78	"
"	"	7	"	"	84	"
"	"	7½	"	"	90	"
"	"	8	"	"	96	"
"	"	8½	"	"	102	"

But there is another circumstance connected with the rearing and fattening of swine, which, if properly attended to in practice, will make the business more profitable than the above table indicates: I mean the great quantity of valuable compost the swine will manufacture, if supplied with suitable raw materials. There can be no more legitimate and pertinent inquiry for the farmer of New England than this,—How can I convert the waste or unemployed vegetable substances on and around my farm into good manure? In considering, then, the policy or profit of fattening swine, the item of manure must have a prominent place in the account.

On the basis that a bushel of corn, ground into meal and properly fed, will make 12 lbs. of dressed pork, we will take four early March pigs, of a good breed, and when they are six weeks old place them in a pen. I name four pigs, because that is about the right number to be in one pen together, and excite one another to eat and thrive well, and work industriously in tumbling the compost over. The four pigs shall be fed till 9 or 10 months old, and shall from time to time be supplied with materials, in a well-arranged pen, for making manure. We will state the average price of the first quality of pork at 7 cents per lb., which is a low estimate, taking a run of 10 or 12 years past. The average price of corn for 10 years past, in my locality, would not exceed 80 cents per bushel; but we will call it 84 cents. With these conditions, the following statement may be made:

The four pigs, fed till 9 to 10 months of age, on prepared corn meal, will weigh, on an average, dressed 300 lbs. each, or in all 1200 lbs., worth 7c per lb.	$84,00
Supplied with raw material, they will make from 25 to 35 loads of compost, measuring 35 bushels each, and richly worth a bushel of corn each; say 30 loads, 84c.	25,20
	$109,20

The following deductions must be made:

Worth of pigs at 6 weeks old, $2 each	$8,00	
A bu. of corn making 12 lbs. of pork, and the pigs weighing 300 lbs. each, they have each consumed 25 bu., or in all 100 bu. at 84c	84,00	$92,00
Balance, over and above 84 cents per bu. for the corn, of 17 cents per bu., or in all		$17,20

The above balance of $17,20 will well pay the labor of feeding and of supplying compost materials, and a pile of compost has been prepared, at a cheap cost, which will make a good mark wherever applied on the farm.

The foregoing calculations are in a good degree based on experiments made by other persons; but on a careful review of my own practice for several years past, I can furnish a statement showing the profit of fattening swine in a more favorable light

than the above account presents. Before giving my own account, however, a few considerations will be mentioned, which though more or less incidental, are yet quite important to the subject in hand.

In fattening swine, very much of the profit depends upon the breed of hogs fed; some breeds paying a good profit for what they consume, while others, fed on the same amount and quality of materials, barely pay or make a loss on what they eat. Crosses of the Suffolks or Mackays with our best larger breeds are certain to pay well for fattening, if properly fed. The best practical pigs, however, that I have had any experience with, are those made by a half-and-half cross between the Suffolk and Mackay breeds. The cross-bloods possess the essential qualities of early maturity and a tendency to take on flesh rapidly, combined with bone enough to stand up straight on their legs till the time of slaughter; and can easily be made to weigh from 300 to 400 lbs., at ten months old. With such pigs, I always feed out my corn courageously, and realize a satisfactory return for it in pork and compost.

The amount and value of the compost made during the time the pigs are fattening, will depend upon the care and system used in supplying good materials to them, in a well-arranged pen. The materials thrown to the pigs a little at a time and often, may be waste or unemployed substances, of every name, which are rich in vegetable matter —such as muck, scrapings from the forest, thickly-matted turf,—especially if from a soil different in kind from that to which the compost is to be applied,—green brakes and bushes of a year's growth, green weeds of every kind, the rich wash centering in hollows, strawy horse-manure which cannot otherwise be preserved from damage, before wanted for the land, &c., &c. The pen for four pigs should not exceed some 15 feet square; or perhaps the best proportion, considering the convenience of getting the materials in, and the compost out of the pen, is some 10 or 12 feet wide, by 16 feet long—thus concentrating the droppings within a small space, making the compost up in height rather than in length and width, and lessening exposure to evaporation. The pen should be dry, cool and airy, in distinction from a slough, should not be in a dark, miry, foul place away down under the barn, and should be covered with a roof—a cheap one will do. Shelled corn should be occasionally forked into the compost, to encourage the pigs to work. There should be a feeding-apartment, leading out of the compost pen, and always kept perfectly sweet and clean.

For feeding the pigs the first 8 or 10 weeks of what may be called the forcing or fattening process, or say through September and October, it is well to raise a mixed crop of the lighter grains, as peas and oats, or barley and oats; for this kind of feed causes the pigs to make more bone and size of carcase in proportion to what they gain in pork, than corn-meal does. For this period, I prefer peas and oats to any other grain, and sow for the purpose 1½ bushel of peas with 1½ bushel of oats to the acre. The product is about the right mixture for feeding; and ground into meal and fed in about equal quantities with cooked vegetables, the pigs commence fattening finely, while at the same time they make bone and grow rapidly, so that fed the following two months on corn and cob-meal they easily attain a weight of from 300 to 400 lbs. each, dressed, and are strong enough in their legs to stand up well till the day of slaughter. During this period, also, the refuse apples, small potatoes, and meaner portions of various root and garden crops, some or all of which are always afforded by the farm, may be advantageously cooked and fed to the pigs. A boiler should be set in a convenient place for cooking swine-feed, and the boiling may be effected with very cheap fuel. Two tubs should be provided to receive the boiled food, and fed from alternately,—the materials in once undergoing the desirable fermentation while feeding from the other. The cooked vegetables, smoking hot, should be placed in the tub in layers with the ground peas and oats, the whole mashed fine together, and after standing covered an hour or so, the wash of the dairy and kitchen may be added, making a thick soup of the mass, which may then stand to undergo a moderate fermentation. If fermentation however is carried too far, the quality of the food will be injured; but if suffered to proceed to a mild degree, the food is the more readily dissolved by the fluids of the stomach, and more fully appropriated in the carcase.

For the last 7 or 8 weeks, or through November and December till the time for slaughtering, I prefer cooked corn and cob-meal to any other feed. The meal is more light and bulky than clear corn-meal; swells very much by cooking; distends without overloading the stomach; is not so concentrated but what its nutritive properties are easily and fully digested and assimilated; and the ground cob, besides its considerable amount of nutritive matter, is known to possess alkaline properties which go to neutralize the too great acidity apt to be produced in the stomach by ground corn. An accurate experiment has been made in Virginia, to ascertain the amount of saccharine or nutritive matter in the corn cob. Ten bushels of corn and cob, and ten bushels of clear shelled corn, were in separate lots subjected to distillation. The ten bushels of corn and cob yielded thirteen gallons of spirits, and the ten bushels of clear corn eighteen gallons. Allowing that the ten bushels of corn and cob would have given five bushels of shelled corn, there would be left as the product of the cobs, four gallons of spirit, or nearly half as much as was afforded by five bushels of corn.

Having thus stated the incidental but important considerations connected with the question I am attempting to determine, I am now prepared to make out an account of the profit of fattening swine, based on personal knowledge and practice.

Four early March pigs, of a first rate breed, are placed in a pen when 6 weeks old, or about the middle of April. Those of the same age are selected, and if all of one litter so much the better, as they will be more likely to live in peace together. From about the middle of April till the first of September, which is about 20 weeks, they are kept on light cheap food, as the wash of the dairy and kitchen, with a little corn and cob-meal added after the first 4 to 6 weeks; and they also have the weeds and other green trash of the garden thrown to them from time to time. After looking the matter over carefully, I have concluded that if the light and mixed food of this period is estimated as of the average value, per day, of 8 quarts

of corn and cob-meal, that will certainly equal, and I think exceed, the real cost of keeping.—Eight quarts of corn and cob-meal per day, is 56 quarts per week, or 35 bushels for 20 weeks, equal to 17½ bushels of clear corn, the price of which we will call 85 cents per bushel, though the average price of corn for ten years past in the region around me will not exceed 80 cents; say then

17½ bushels of corn, at 85c per bu.	$14,87	
The miller's toll for grinding 35 bu. corn and cob, at 4c per bu.	1,40	$16,27
Through Sept. and Oct., which is 8½ weeks, the four pigs have ½ bu. per day of peas and oats, ground, mixed with ½ bu. per day of cooked hot vegetables, the whole slightly fermented; they consume, then, 3½ bu. of peas and oats per week, or say 30 bu. in the 8½ weeks, worth 60c per bu.	18,00	
Also, 30 bu. small potatoes, or other refuse vegetables, worth, cooked, 20c per bu., which is rather high	6,00	
The miller's toll for 30 bu. peas and oats, at 4c per bu.	1,20	25,20
Through November and December, till killing time, say 8 weeks, the four pigs have, on an average, the meal made from 1 bu. of ground corn and cob, per day, well cooked, which is 7 bu. corn and cob per week, or 56 bu. in all, equal to 28 bu. of corn, worth 85c per bu.	23,80	
Toll for grinding 56 bu. corn and cob, 4c per bu.	2,24	26,04
Worth of the four pigs at 6 weeks old, $2 each		8,00
Total cost of fattening the four pigs		$75.51

The other side of the account:

When slaughtered, the pigs will average 300 lbs. each, dressed, or will weigh 1200 lbs. the four, worth 7c per lb.	84,00	
They have prepared 30 loads of compost, between the 15th of April and 1st of Jan., worth a bushel of corn, or 85c per load	25,50	109,50
Deduct cost of fattening		75,51
Balance, over and above market price of the materials consumed		$33,99

MEMORANDUM.—If the price of corn were $1 per bu., then on the 17½ and 28 bushels of corn in the above account of cost of fattening, there would be an addition of 15c per bushel, making an increased cost of $6,82.

So far as I can judge, or have reason to believe, the above statement of the cost of getting four pigs of a first-rate breed up to the weight of 300 lbs. each, dressed, is plenty large enough; but if the reader should insist that it ought to be made larger, I in turn may with propriety claim additions to the other side of the statement, while the average price of corn for a run of 10 years past would not, in my region of country, exceed 80 cents per bushel, my pork has on an average sold for more than 7 cents per lb.; and I think it may be truly said that an extra quality of pork, such as the system of feeding a first-class breed of pigs as above described may always make, will any year command, in any considerable market, from ½ to 1½ or 2 cents per lb. more than the current price of pork. As for the weight of the pigs, I may claim some 100 lbs. or more addition on the four; and as for the compost made by the pigs, I had better pay one dollar a load for it rather than not have it.

By feeding the four pigs from Sept. 1st, to about Dec. 1st, on a greater quantity of cooked vegetables and a less quantity of meal per day than is reckoned in the above account, the expense of feeding would be lessened; but in offset, the pigs thus fed, and killed at the age of 10 months, would not weigh as much, the texture of the pork would not be as firm, nor the price quite as high as if fed as stated in the account above. Still, farmers situated in localities rather unfavorable to the profitable raising of grain, and where it commands rather a high price in proportion to the price of pork, may find it advisable, in fattening swine, to feed more largely of cooked vegetables and less of grain than is my custom, and take up with a less amount of pork.

For one, I am satisfied that it is profitable to fatten a good breed of swine here in New England, provided the business in all its departments is managed understandingly and with strict system. I have to say to my brother farmers, that before purchasing town manures very largely, or sending money off for foreign concentrated fertilizers, it is well to look about and see if the cheaper materials and means at home are fully employed for fertilizing the soil at a less cost. The substances near at hand and fit for making a rich compost, are none the less valuable as fertilizers because they lie common and in abundance on every hand.

F. HOLBROOK.

Brattleboro', March 4, 1854.

For the New England Farmer.

PRUNING ORCHARDS.

MR. FARMER:—Were a tree gifted with speech, what complaints should we hear on visiting most orchards in New England. Of harsh treatment—commencing with that *bane* of all nurseries and young trees, the murderous jack-knife in the nursery—then *torn* from its place, leaving a large portion of its roots, and set as we would a stake to struggle by itself. The poor tree hesitates a year or two whether to attempt a new existence or give up the ghost without further struggling—many of them, particularly root-grafted trees grown in hot-beds of manure, very sensibly prefer the latter course; and who can blame them?

For a few years past many places in New England have been flooded with tall shrubbery, *misnamed* apple trees, by unprincipled or ignorant speculators from Western New York. These have been sold by calling on individuals and getting orders for trees (!) to be sent the next season. The seller has a speech for every one, stereotyped for him by the owner before starting, and talks so learnedly of the height of his trees, their rapid growth and root grafts, that he induces many to engage them in advance. The trees are received in due time, and the purchaser, much to his surprise, finds a bundle of long switches of some three years' growth grafted on pieces of mutilated roots, instead of such trees as he expected. But, he says, *perhaps* they may grow—it is a small matter to quarrel about, so he plants them for an orchard, and in three years a good portion of them are not to be found in this world.

Such as have been reared in New England in the good old way, practiced and taught by our Fathers, are more hardy, and commence a new struggle. Removed from the protection of their fellows in the nursery, they attempt to protect their naked trunks from our burning suns by twigs and leaves, but are still pursued by the old enemy, the jack-knife, if the owner finds time to use it. After growing in a state of half starvation in a soil deprived of its original ingredients necessary for their health and productiveness until thoroughly diseased, they then attempt a new existence by throwing out new limbs or sprouts, but are now met by the axe and hand-saw, the sprouts are broken off and the large limbs removed in quanti-

ties, in March or April, when the owner, having completed his winter's work, has time to do it. As warm weather approaches, a poisonous sap runs from the wounds, blackening and killing the bark, when a few years ends their miserable existence.

This may look like a fancy sketch, but I ask any intelligent cultivator, looking at *cause* and *effect*, if it is not the true cause why so many orchards in New England are worthless at fifty years of age, instead of being healthy and fruitful at two hundred years old, as they would be with proper treatment.

A tree left to itself needs little or no pruning. Look at our fields, where we find owners of taste, we find a liberal supply of shade-trees where Dame Nature planted the seeds and has taken all the care of them. Does she not dispose of all the small twigs and leaves on the bodies as soon as she has no further use for them? And, as a whole, does she not form as good or even better, more healthy and graceful tops, than we find generally in orchards that have been liberally aided with the jack-knife and hand-saw? Certainly from such a teacher we ought to be able to take some practical lessons. I do not say that pruning is never necessary, but do say that, in the culture of trees, nature should be studied and *aided*, never *thwarted*.

When one procures trees for orchard planting, his inquiry should be, not how tall? but what is their diameter at the base?—are they on entire roots?—at what distance have they grown from each other in the nursery?—what has been their exposure to winds?—have they been once or twice transplanted and cultivated so as to be well filled with fibrous roots?—and have they been grown in ordinary soil, or have they a forced growth by stimulating manures? I will not insult the common sense of any man by saying what answer should be given to these questions. No tree requiring a stake should be planted in an orchard. If not rooted and grown enough to stand alone against all winds without, throw it aside as useless.

Trees properly planted require attention during the first few years to form a well balanced top, taking out some and shortening other limbs. After this the pruning required is very trifling—in most trees none during the ordinary life of man. But in this wicked world we must take things as they are and not as they should be, or would have been, with proper early attention and culture, and as far as practicable, remedy evils already existing.

The most common error in pruning is thinning out the whole interior or central portion of a tree to "let in the sun," thus destroying one-half of the bearing branches, leaving long, naked limbs producing fruit only at the ends beyond the reach of anything larger than a raccoon, without the aid of long ladders, lessening the quantity of fruit and injuring the quality. Apples protected by leaves are much *better*, *larger* and *fairer*, (being grown as Nature designed,) than when grown on the ends of long branches, exposed to the sun in July and August. In the cool, moist and cloudy atmosphere of England, this course is not only proper but necessary, some of our American apples even requiring the trees to be trained to a wall to ripen their fruit, but the course practiced and taught by the best English cultivators is for their climate, not for ours. A tree properly trained for them in a few years may be ruined by the hot suns and cold winters of New England.

Trees require different training, depending on varieties. A course proper to perfect the Northern Spy or Newtown Pippin is wrong for the Rhode Island Greening and northern varieties generally.

When old trees are grafted, a very different course of thinning out is necessary, and generally during the first few years it is necessary to cut out many of the grafts. It is of little use to prune old trees standing on worn out soils (as is the case with most of our old orchards) without first cultivating, manuring and supplying alkalies, of which the soil has become exhausted; but as this article is already quite too long, I shall say nothing of cultivation.

When a tree throws out sprouts on its branches it is a sure indication of disease, and the natural remedy is to leave the best to form new limbs and gradually remove the old branches. If this is done with the *first* sprouts, it will be necessary to leave very few, and cut out old branches accordingly. Old decayed trees which have been entirely neglected, when filled with vigorous shoots, can in a few years have entire new tops by reserving the strongest in proper places and cutting out all the old limbs. These, every man understands, should be cut close to the growing limbs, and so as to heal well, and covered with some composition. The best I have ever tried is composed of tar thickened with brick dust, and applied when warm with a brush. Grafting wax or Gum Shellac dissolved in Alcohol is liable to peel off on large limbs.

The time for general pruning in New England is in June or early in July, after the first growth. The sap is then rapidly formed, and descends from the leaves so that all fresh cuts commence closing immediately. Large dead and dying limbs may be cut through the summer, September and October, if covered with composition. All winter pruning is bad. February, March and April are the worst three months in the year for pruning any trees. Sap soon after ascends, flows from the fresh wounds made by cutting large limbs, poisoning and killing the bark, and, if a general pruning is then done, it is very destructive.

I am aware that winter or early spring pruning is advocated by many very intelligent men, but in a country where every winter the themometer falls from 10° to 20° below zero it is far better to let trees alone. If any one will notice an orchard so treated (and it is often done)—see it again in August with the black and dead bark on limbs and bodies caused by flow of sap, and mark its progress a few years, he must be satisfied it may be as well to cut a tree at the root and remove it entire, as to cut off one-fourth of its top in the winter or early spring.

C. Goodrich.

Burlington, Vt., March, 1854.

Remarks.—We bespeak for this article more than the ordinary attention of the reader.

☞ Many who find the day too long, think life too short; but short as life is, some find it long enough to outlive their characters, their constitutions, and their estates.

WHERE DOES ALL THE CORN GO TO?

When we read of the twenty-five thousand bushels of corn raised in a single year, by Mr. ELLSWORTH, in Indiana, and of the ten, fifteen, twenty, and twenty-five hundred barrels produced on single plantations or farms in Virginia or Ohio, beside the vast aggregate from the smaller plantations and farms scattered through the land, well may we inquire, "where can it all go to?"

On looking at the pages of the "*United States Economist*," a most valuable paper printed at New York, and principally devoted to money matters, commerce, manufactures and state of the markets, we find at least a partial solution to the question.

This paper gives a statement of the corn shipped from the port of New York within the short space of two weeks ending March 11, 1854, as follows:—

To Liverpool,	305,738 bushels.
To Belfast,	12,930 "
To Queenstown,	13,016 "
To Glasgow,	35,398 "
To London,	7,470 "
To British N. A. Colonies,	1,330 "
To British West Indies,	630 "
To Cuba,	586 "

From Philadelphia, mostly to Liverpool:

Corn, 302,037 bushels. Corn Meal, 63,236 bushels.

From Boston, to foreign ports:

Corn, 7,512 bushels. Corn Meal, 1,500 bushels.

From Baltimore, to foreign ports:

Corn, 69,446 bushels. Corn Meal, 720 bushels.

We subjoin the following table as affording at a glance the amount exported in a single week, and also the aggregate since Jan. 1. Comparatively little is sent from the Southern ports, most of it being first brought North, and re-shipped to foreign ports.

Exports of Corn from New York to foreign ports for the week ending March 9, 1854, compared with the corresponding week of last year:

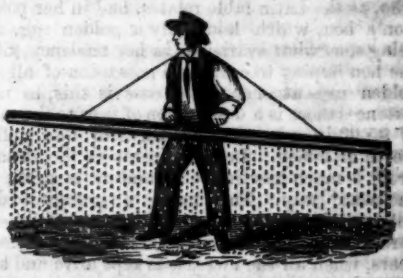
	1853		1854	
To—	Bush.	Value.	Bush.	Value.
Liverpoool,	86,178	$57,128	129,434	$127,479
Glasgow,			20,744	20,745
Belfast,	8,980	5,927		
Havre,			3,803	3,650
British West Indies,	658	448	100	100
Cuba,			349	418
New Grenada,	240	170		
Total Corn,	95,816	$63,503	154,430	$152,392
Total in February,	109,982	$76,856	555,698	$564,564
Total in January,	42,840	31,690	333,927	327,498
Since Jan. 1,	248,638	172,049	1,094,053	1,044,454

Now if we multiply the amount sent from the single port of New York in one week by the 52 weeks in a year, we shall have the enormous amount of *eight millions and eight thousand bushels* sent from a single port in one year!

Then we have gathered above, that, the sum of 444,481 bushels have been sent from the ports of Baltimore, Philadelphia and Boston, in about two weeks, which, multiplied by 26, half of the weeks in the year, would give an aggregate of *eleven million, five hundred and fifty-six thousand, five hundred and six bushels*, making 19,664,506 bushels disposed of by sending it off to feed our hungry brethren across the water. We have no idea that this is any thing like the true amount sent out of the country; but if it is, it is only a moiety of the whole amount expended.

Corn meal has now become an article of food in almost all families of the county, so that vast quantities are required for this purpose; then look at the immense amount fed to horses, cattle, swine, poultry and sheep. There is scarcely a town in New England but uses its six to ten thousand bushels a year, of southern corn, in addition to the products of its own acres, and then must be added the vast amount used for distillation.

Even in New England, the corn crop is an easy and profitable one to raise, with a ready market at the door of any farmer who produces it. War or no war, a large surplus beyond our own wants will be needed; in this view it becomes us as farmers, to see if we cannot produce enough for our own wants and keep our cash for some other purposes than expending it for corn.



WELLS' PATENT GRASS SEED SOWER.

The above represents the mode of operating a very desirable and ingenious hand-implement for sowing grass seed. It is a simple hopper with a zinc bottom perforated with holes, of equal size and distance apart; the seed is distributed by means of a flat rod on the bottom, extending from one end to the other, with notches corresponding with the holes in the zinc, and notched on each side, which keeps the seed in motion, and equally divided from one end to the other. It is worked by a small lever on the side, to which is attached a guage by which the machine can be regulated to sow any quantity desired; it sows the seed very accurately, is not liable to get out of order, and is neat, simple and cheap. It is very useful to the farmer, for the easy, rapid and perfect performance of a labor otherwise very difficult. Price $4.

FIRST ANNUAL REPORT OF THE SECRETARY OF THE BOARD OF AGRICULTURE.—We have examined this Report sufficiently to come to the opinion that it is the most valuable document that has yet been issued in this State, on agricultural subjects. It is written in a clear and comprehensive style, and in a phraseology so plain and direct that no

one will find difficulty in understanding all its parts. We shall improve the earliest moment to speak of it more at length and give the reader extracts from its pages. Mr. Secretary FLINT has done himself great credit in the production of this Report, and the document is an honor to the State under whose auspices it has been produced.

For the New England Farmer.

BEE-CULTURE—No. 3.

Another obstacle to bee-culture consists in the *destruction* of the bees by the bee-keeper.

This cruel and barbarous custom still prevails to a greater or less extent in almost every portion of the country. It necessarily prevents the legitimate and natural increase of colonies, and limits greatly the profits which might otherwise be derived from them. This has been done under the mistaken apprehension that this procedure becomes necessary in order to secure the avails of their labor. This policy is about as wise as it would be for the poultry-keeper to destroy his fowls in order to get possession of the eggs which are found within, or it reminds one of the woman who, as the Latin fable relates, had in her possession a hen, which laid daily a golden egg, and being somewhat avaricious in her tendency, killed the hen hoping to come into possession of all the golden eggs at once. The case is this, in most instances there is a destruction of bees to the value of $5,00 in order to secure three or four dollars worth of honey. In many instances the ratio of profit is much less than this, and it is profit the backward way. This mode of procedure does not pertain to any successful system of bee-culture. How very different the result, in a series of years, when all the increase is kept alive and kept at work.

Another obstacle to bee-culture is found in the *reluctance* of very many persons to engage in the enterprise.

This reluctance has its origin in fear. It arises from the fact that bees are furnished with a little formidable weapon of defence, whose sharp point is much dreaded by those who are very imperfectly acquainted with them, but very little dreaded by the experienced apiarian. He knows that it is merely a weapon of defence, and not one which is used in sport. It is employed only in desperate cases, or those which are considered desperate, in which they are willing to die in the conflict. The bee when it stings leaves its sting in the wound, and the extremity of the abdomen is torn off with it, and he dies soon after. The experienced apiarian gives his bees to understand early, by very cautious and gentle management at first, that they are not to be harmed by any of his manipulations. In other words, his bees soon become accustomed to his presence and are not annoyed by it, and are not tempted to use upon him their weapons of defence. Hence his fears are at an end. He finds his bees are domesticated or rendered manageable in the same way and upon the same principle as any other creature which is subject to his control, viz: by *familiarity, gently conducted at first, and often repeated*, until they are no longer strangers, and there is no longer any trouble.

North Bridgewater, Mass.

THE BEE AND THE CRICKET.

BY GEORGE KENT.

A Bee, one day, in arbor lay,
Or rather was fond of humming;
Busy and blithe, taking his tithe
Of "anise, mint, and cummin."

A Cricket near was in high cheer,
Chirping in lively ditty;
The work as drudge he thought "all fudge"—
For toil he felt no pity.

'Twas summer time, each in his prime,
One bent on mirth and pleasure;
Wise to provide, the other plied
His task, for winter's treasure.

The summer's day has passed away,
And Autumn brought "Jack Frost;"
Each in his turn began to learn
Of time to count the cost.

The Bee could show of cells a row
Of well-filled sweetest honey;
The Cricket's song had brought along
No food "for love or money."

The winter came—for very shame,
The Cricket was found dodging
In any nook where he could look
For miserable lodging.

The Bee was hived, and joyous thrived,
In comfortable quarter;
Among his friends his winter spends
In pleasure, as he ought to.

Now which, think you, on sober view,
The wisest part has acted?
If you have doubt, don't find it out
As Cricket poor in fact did.

Little Pilgrim.

For the New England Farmer.

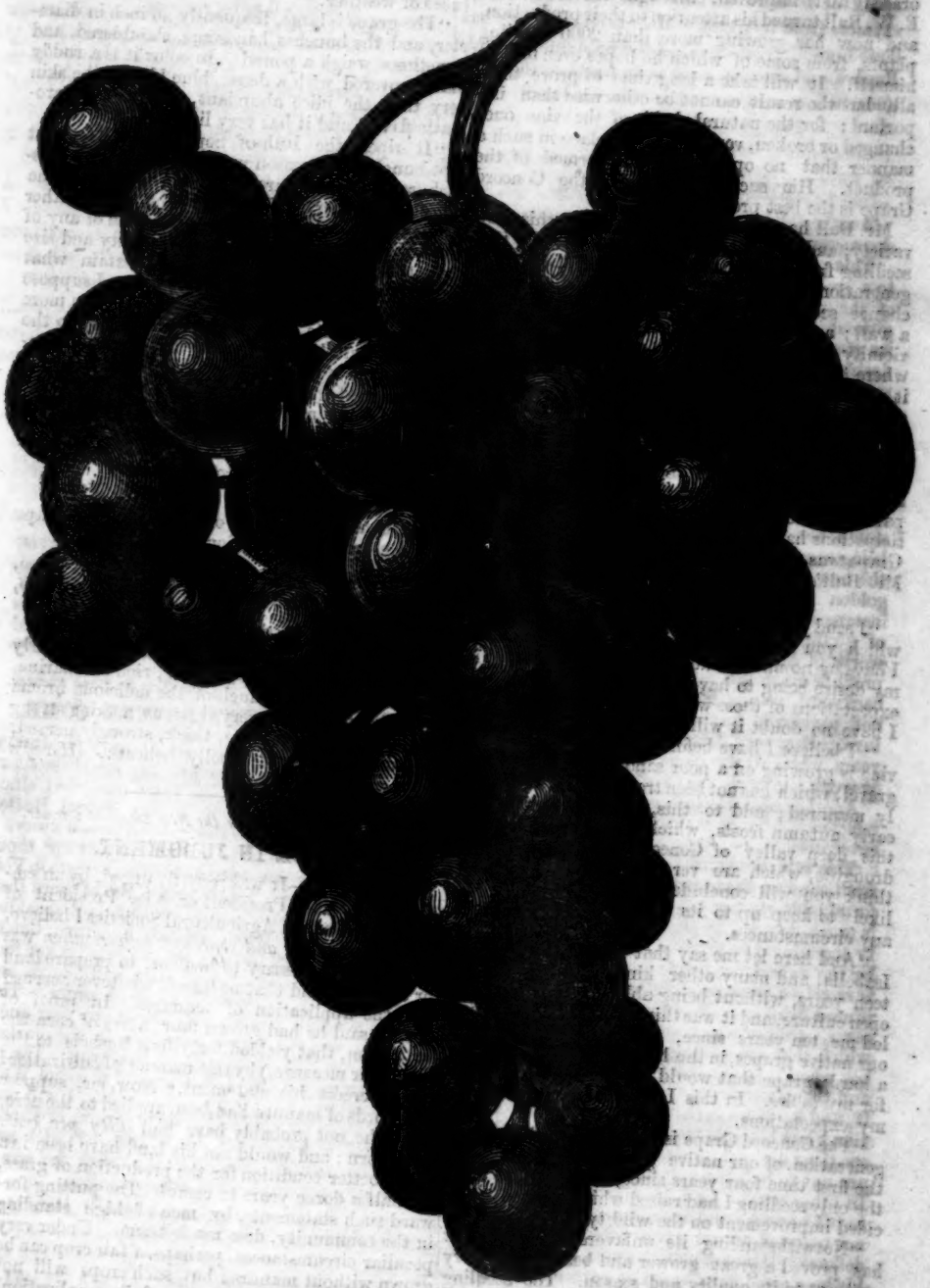
WHY DON'T THE BUTTER COME.

MR. EDITOR:—I notice the inquiry of JOSEPH H. WELLS as above, and will say we Vermonters have had similar trials in years past, but since the introduction of O. R. Fyler's Patent Butter Working Churn, those things have passed away. I am informed from good authority, that one thousand of these churns were sold to the farmers in Vermont, last season. I have seen a list of more than three hundred farmers that use them, all speaking in high terms of them, not only to churn, but to work and salt the butter; the cream is broken four times each revolution, and they will churn any cream that *can be churned* in short order. This churn is a new patent, only about one year and a half old, and no rights have been in the market, but we are told there will be this year. The retail price is, 4, 5, 6, 7½ dollars, and if friend Wells will send me any of the above sums, I will send one of those churns; and if he is jealous of strangers, and will give me his address, I will send him one, and if it don't do the work he wants, may only pay expenses of transportation.

HENRY HOLMES.

Grafton, Vt., Feb. 20, 1854.

WORCESTER COUNTY AGRICULTURAL SOCIETY.—This society has elected the Hon. John Brooks, of Princeton, a member of the State Board of Agriculture, in place of Harvey Dodge, Esq., of Sutton, whose term had expired.



THE CONCORD GRAPE.

THE CONCORD GRAPE.

Long ago impressed with the opinion that our native grape was capable of being greatly ameliorated and improved, through the seeds, Mr. E. W. Bull turned his attention to their production, and now has growing more than 2000 seedling plants, from some of which he hopes even to beat himself. It will take a long time to prove them all, but the result cannot be otherwise than important; for the natural habit of the vine once changed or broken, variation takes place in such a manner that no opinion can be formed of the product. His success in raising the Concord Grape is the best proof of this.

Mr. Bull has given a brief history of this new variety, and it will be noticed that he calls it a seedling from our native grape of the second generation. It is this; some years ago he found a chance seedling growing upon his grounds near a wall; as there are no wild grapes in the near vicinity of his place, he removed it to his garden, where he watched it with some care, and gave it good cultivation. In a year or two it produced a few bunches of fruit, ripening as early as the last part of August, and remarkably sweet and free from the foxy flavor of the wild type. The idea at once occurred to him that another generation would be a still greater improvement, and a parcel of seeds was saved for planting. His anticipations have been fully realized; the Concord Grape was the produce of these seeds. We annex Mr. Bull's account of the origin of his vine.

Concord, Mass., January, 1854.

"I send you the history of the Concord Grape, which you desired for your excellent Magazine. I have by no means said all that can be said for it, my desire being to have it come fully up to the expectations of those who may cultivate it, which I have no doubt it will.

"I believe I have before stated to you that my vine is growing on a poor sandy loam, overlaying gravel, which has not been trenched and but slightly manured; add to this, the late spring and early autumn frosts, which we are liable to in this deep valley of Concord, and the summer droughts, which are very severe with me, and I think you will conclude with me that it will be likely to keep up to its character under almost any circumstances.

"And here let me say that I have cultivated the Isabella, and many other kinds of grape, for fifteen years, without being able to ripen them in open culture, and it was this constant failure which led me, ten years since, to raise seedlings from our native grapes, in the hope that I should obtain a hardy grape that would give me a sure supply for my tables. In this I have succeeded beyond my expectations.

"The Concord Grape is a seedling, in the second generation, of our native grape, and fruited for the first time four years since, being at that time the only seedling I had raised which showed a decided improvement on the wild type.

"Notwithstanding its unfavorable position, it has proved a great grower and bearer, and very constant to its quality and season. The seedling from which the Concord was raised grew near to a Catawba, and, it is quite possible, was impregnated by it, it having the flavor of that variety. The parent vine was a good and sweet grape, large, black, and ripe the 20th of August.

"The Concord grape, as I said before, is a strong grower; the wood strong, the foliage large, thick, strongly nerved, with a woolly under-surface, and has never mildewed nor rusted under any vicissitudes of weather.

"The grape is large, frequently an inch in diameter, and the bunches handsome, shouldered, and sometimes weigh a pound. In color it is a ruddy black, covered with a dense blue bloom, the skin very thin, the juice abundant, with a sweet aromatic flavor, and it has very little pulp.

"It ripens the 10th of September. The first ripe bunch of the season was exhibited at the Massachusetts Horticultural Society's Room, on the 3d of September, 1853. The vine was neither pruned nor pinched, nor had application of any of the horticultural arts, whereby precocity and size are attained, my object being to ascertain what would be the constant habit of the vine. I suppose that its quality would be much improved in a more favorable climate, and that its superiority to the Isabella would be as apparent under such circumstances as it is here.

"The great want of the country in this latitude is a good table and wine grape, which shall also be early, hardy, and prolific. The Concord Grape fulfils these conditions, and I feel a sincere pleasure in offering it to my countrymen."

E. W. Bull."

We close our account of the Concord Grape with a more full description.

Bunch, large, long, neither compact nor loose, handsomely shouldered; *Berries*, roundish, large, three-quarters of an inch in diameter, sometimes measuring an inch; *Skin*, thin, very dark, covered with a thick blue bloom; *Flesh*, very juicy, nearly or quite free from pulp; *Flavor*, rich saccharine, and sprightly, with much of the delicious aroma of the Catawba; *Vine*, very vigorous, making strong wood; *Leaves*, very large, thick, strongly nerved, not much lobed, and woolly beneath.—*Hovey's Magazine.*

For the New England Farmer.

ERROR IN JUDGMENT.

Mr. Editor:—It was recently urged, by an eminent gentleman, President or Vice President of one of our County Agricultural Societies I believe, that *deep plowing and thorough pulverization* was all that was necessary to be done, to prepare land for a crop;—and that no benefit whatever accrued from the application of manures. In proof of this, he said he had grown four acres of corn the last season, that yielded forty-four bushels to the acre, (fair measure,) by this manner of cultivation. I fully credit his statement. Now, sir, suppose four cords of manure had been applied to the acre, would he not probably have had *fifty per cent.* more corn; and would not his land have been in a much better condition for the production of grass, for half a dozen years to come? The putting forward such statements, by men of high standing in the community, does much harm. Under very peculiar circumstances, perhaps, a fair crop can be grown without manure; but such crops will not begin to justify the omission of its application. And whoever concludes that it will, *errs in judgment.*

Feb. 22, 1854.

IMPROVEMENT OF THE DAIRY.

LEXINGTON, JAN. 9, 1854.

To the Trustees of the Massachusetts Society for Promoting Agriculture.

GENTLEMEN—In a communication which I have just received from the Hon. E. R. Hoar, late President of the Middlesex Agricultural Society, he informs me that he had a conversation some weeks ago with one of the members of your Board, in regard to the mode in which the State Society could best promote agricultural improvements, through the agency of the County Societies; and that he then suggested, that if the Trustees of the State Society had funds which they could spare for the purpose, it might be well for them to divide the State into districts, perhaps *four* in number; the Western Counties one, Worcester and Norfolk one, the Southern Counties one, and Essex and Middlesex the fourth; that should the sum appropriated admit of it, $150 should be offered in each district as premiums for the *best dairy of cows*, not less than *six* in number, which should have been owned for five months previous to the cattle show by the exhibitor, divided into three premiums of $75, $50, and $25, open to competition to any person in either of the counties composing the district, and offering it in Middlesex this year, and in Essex next, or *vice versa*, and in like manner in each of the other districts.

In case the funds of the Society would admit of offering only $100 to each district, in premiums of $60, $30 and $20, or in two premiums of $60 and $40, it might be proportionably useful.

The foregoing plan presents a mode of offering premiums, which if not entirely new, has been adopted only to quite a limited extent, by any of our agricultural societies. The object is one of great importance: the advancement of that important branch of agriculture which pertains to the dairy. Hitherto the attention of agriculturists has been mainly directed to improved modes of culture, with too little regard to the dairy, or the stock best suited to its purposes. It is true that to this end the Trustees of the Massachusetts Society have for many years past directed their attention, and not without beneficial results.—That all their efforts should have been crowned with entire success could not reasonably have been expected. That they had aided in awaking the minds of farmers to a sense of the importance of greater improvement in this branch of husbandry, cannot be questioned. There is still much need of further effort to advance this department, and bring it nearer to perfection.

In the confident belief that the plan above mentioned, if carried out under proper regulations, would have a useful and beneficial effect, I beg leave to offer it for your consideration, cherishing the hope that it well not be deemed unworthy of your adoption and encouragement.

Very respectfully, your obedient servant.

SAML. CHANDLER.

BOSTON, FEBRUARY 18, 1854.

Gen. Sam'l Chandler, Lexington:

DEAR SIR—Your communication of January 9th was duly received by the Trustees of the Massachusetts Society for promoting Agriculture, and has been considered by them with all the attention which was due alike to its subject and its source.

At the last meeting of the Board, the undersigned were appointed a Committee to communicate to you the conclusion to which the Trustees had come, with full powers to arrange all the details which might be necessary for carrying their views into effect.

You have done the Trustees of the State Society no more than justice in saying that "they have directed their attention for many years past to the advancement of that important part of Agriculture which pertains to the *Dairy*." They deem no department of husbandry more interesting or more important, and they will gladly avail themselves of the suggestions of experienced farmers, in doing whatever more may be in their power in the same directions.

With this view, and in conformity with the general ideas of yourself and Judge Hoar, they have authorized and instructed the undersigned to select four counties in different quarters of the Commonwealth, in which premiums for the best dairy cows shall be offered by the State Society during the present year, and they have appropriated the sum of six hundred dollars for the purpose. Should the result of this experiment fulfil the expectations which they are encouraged to form, it is not improbable that a similar course will be pursued in the other counties in succeeding years.

For the present, however, we are authorised to announce to you, and through you to the farmers of Middlesex, and other parts of the State, that the Agricultural Societies of *Middlesex*, *Berkshire*, *Worcester* and *Bristol*, are hereby severally empowered by the Trustees of the State Society, to offer the following premiums for the present year, and to call upon our Treasurer for their payment, viz:—

For the best dairy of cows, not less than six in number, and which shall have been owned by the exhibitor and kept within the county not less than five months previous to the Cattle Show, $75.

For the second best do, $50.

For the third best do, $25.

You will observe that we have so far departed from your suggestions, as to confine the competition to the separate counties, instead of adopting the district system, which you proposed.

And we desire, also, to add, that the whole responsibility of judging as to the cattle exhibited, and of awarding the premiums, is intended to be left to the County Societies, respectively, subject only to the conditions and limitations which have been already stated.

We remain, Dear Sir,

Respectfully, your obedient servants,

ROBT. C. WINTHROP,
JAMES BROWN,
GEORGE W. LYMAN,
} *Committee.*

DESTRUCTION OF BIRDS AT VANSITTART ISLAND.—They generally take 2,000 to 2,200 in each pit, in the morning, at one drive; and then jumping into the hole, they set to work to pick their poor captives, pulling off only the feathers of the body, and throwing the carcases out of the hole. This is hard work, and before the end of the season their nails often come off from the continual plucking. The feathers of 25 birds weigh only a pound,

which sells at Launceston for twopence; but Tucker, his wife, and Dick, collected during the season a whole ton, to do which they must have killed 56,000 birds. What an enormous quantity must be annually destroyed amongst the whole party! and yet they say that the flocks do not appear to diminish.—*A Sketcher's Tour Round the World.*

SEVENTH AGRICULTURAL MEETING,

At the State House, Tuesday Evening, Feb. 28.

Subject:—*Dairy Products,—What class of animals are best fitted for the making of butter and cheese, and what is the best mode of feeding for these purposes?*

The meeting was called to order by Hon. Seth Sprague, of Duxbury, and on his motion, Hon. John C. Gray, of Boston, was chosen to preside.

Mr. Gray, on taking the chair, said he was wholly unprepared to make any elaborate remarks, on the subject of the evening's discussion. He considered it a very interesting topic, because the products of the dairy contribute largely to the sustenance of the people of this country. In forming a dairy, the first point is in selecting the stock, and in doing this he thought fine imported stock should not be overlooked, because we can mix their blood with that of our native stock. We all know of the improvement which has been obtained in our breeds of sheep and swine by means of imported animals. Of foreign breeds of cows, he mentioned the Alderneys, as possessing many desirable qualities as milkers, although not handsome animals, nor so good as some others, on account of their leanness,—and alluded to some specimens of this variety owned by the State Agricultural Society, which yield much richer milk than any other stock. Still, he thought we ought to direct our attention to selecting dairy stock from native breeds. One advantage they possess is, that they have grown up on our own soil and in our own climate, which renders them hardier. In this connection he referred to the Oakes cow, which gave 15 or 16 quarts of milk per day, 6 quarts of her milk making one quart of cream. He did not know that she had been excelled by any animal of foreign blood. In his opinion, the most rapid method of improving our stock and securing general good results is to select the finest animals to be found in our own villages. Mr. Gray said there was one point often overlooked in the management of dairies, viz., keeping the milk of each animal separate, whereby the quality and quantity of milk which a cow yields may be ascertained and her value accurately determined. If this course be pursued, instead of turning the milk all together, it may not unlikely be found that a cow may be found in a herd which is actually unprofitable, and which it is for the interest of the farmer to get rid of.

Mr. Seth Sprague said he did not own a dairy farm, and kept but few cows. Yet he had kept both native and imported cows, and found that both varieties varied in degrees of excellence. Single cows could be selected either from the foreign or native stocks which would go far before any of their kind. He had an Ayrshire, which he obtained from the farm of Mr. Webster, that gave last summer during 8 days in June, 59 lbs. of milk per day. He found in the fall, however, that the native cows held out best, and in the year round, would be found equal to imported stock. So far as his knowledge extended, it was not general for *all* the cows of one variety, except, perhaps, the Alderney, to be superior milkers. A gentleman in his immediate neighborhood has a full-blooded Ayrshire, which he obtained from the State Society, from which he gets but very little milk. Still, there is probably a larger proportion of good animals among foreign stock than in native stock. The great question is, where shall we get a *race* of good milkers? The Oakes cow, which is so celebrated, has no progeny which equals her, and this is found to be the case with all extraordinary milkers.

Mr. Brooks, of Princeton, remarked that there was a great diversity of opinion in regard to which were the best breeds of dairy stock, and for that matter he felt unsettled in his own mind. It has taken sixty or seventy years in England for them to raise their pet breeds, and it will take us as long as that to raise ours. The speaker who preceded him (Mr. Sprague) considered foreign stock decidedly the best, but he could not agree with him. Generally, he did not know as they did any better than other races. The foreign cows yield extraordinary quantities of milk only in exceptional cases, and that cow which gives the most milk is not consequently the best cow, for there is a great difference in the amount of butter which the milk from different cows will make. Cows, too, which yield largely of milk, eat a large amount of food. We need a race of cows which shall be good for their beef and hides, as well as for their milk. The Alderney cow is a lean animal, and her hide is thin and unsubstantial. These considerations should be taken into account in deciding the value of an animal. We want a race which shall combine in the greatest perfection, milk, beef and shoe-leather. He thought there was as much in feeding as in breeding cattle. He had some doubts whether it was not best, on the whole, to keep cattle poorly during the winter; get as much bone as possible, and put on the muscle when we get cheap pasturage. At any rate he was trying the experiment this winter with his cattle. It is a pretty nice question. He thought there was a doubt whether Ayshire stock would succeed as well in this country as had been expected—but only a doubt, as there is yet no proof. They have not got acclimated. The Durham give more cheese,

and the Devons and Ayshire more butter, in proportion, and it is a question whether the cow that gives more cheese and less butter, is not just as valuable as the one which gives the more butter and less cheese. Ayshire stock, he thought, would make the best workers, as he had observed that they came up from the pastures cooler than the other stock, and have evidently better wind, which point was illustrated in a bull which he walked behind a quick stepping horse for several miles, the animal, after being in the barn ten minutes, showing no signs of his journey. He had had more experience with this than other foreign breeds. He had experimented with native stock, but found that the Ayrshire turned out best: but yet he would not argue from this that the native cannot be improved, but only that it is not so pure. They can be improved, but a great difficulty is experienced in regard to crosses—there is no certainty about them. In forming a dairy, *education* is as essential to the cow, as in qualifying the human mind for its duties. Cows should be treated kindly, fed well, and kept in perfect health from birth. So with working cattle, they should be brought up in the yoke, and learned to work for a living.

Mr. Cook, of Scituate, inquired how it happened that a cow might give more cheese than butter? He conceived that the same food was required for both.

Mr. Brooks replied that caseine and oil, the former a chief ingredient in cheese and the latter in butter, required different nutrition for the cow to produce them, as for instance, if he wished to obtain a large quantity of milk, he should feed his cows on succulent matter, such as turnips, carrots, and the like; but if he desired butter, he would give them Indian meal, or similar food.

Mr. Buckminster alluded to the necessity of having a *race* of good milkers. We ought to give premiums to that man who endeavors to get up a good breed, not to the person who rides about the country and selects the best animals he can find. He did not know why we might not have a race of good animals. In rearing horses we depend on the blood, and we could also depend on it in raising cows, if we would only give the matter proper attention, and select the best animals. He knew of an imported cow, a very handsome animal, costing $400, which was of little value for milk, and which he believed would never bear a calf. Mr. Cushing, of Watertown, sent a man abroad some ten or a dozen years ago, to select some Durhams, but he had become dissatisfied with them. He probably sent a man who did not understand selecting good cattle, and got imposed upon. Mr. B. gave an account of some stock derived from a herd of North Devons imported into Baltimore many years ago. He had six heifers from this stock, from the milk of two of which he obtained in a little less than 12 quarts, three pounds of butter. Some of this milk put into a tube eight inches long, yielded two inches of cream. The milk from all his cows of this breed was equally rich. He thought it would prove a good race for milk. It is superior in form and flesh to the Alderney.

Mr. Brooks expressed the belief that many cows could be picked out which would do just as well as the cases just cited.

The Chairman referred briefly to the best food for dairy stock. Fresh grass, of course, is the best, but as it cannot always be had, a substitute is needed; and in his opinion, cornstalks raised in drills was the best for fodder. In winter, carrots he conceived to be the best.

Mr. Dickinson said his farm embraced a good deal of pine plain land, and in summer the feed of the cattle often comes short. A year or two ago he accidentially discovered that the long necked summer squash was a most excellent substitute for pasture feed in times of drought. They produce very rich milk, grow rapidly, yield handsomely, and hold on until October. He had two cows, and usually planted twenty hills of squashes, which he broke off green and fed out to his cows at the rate of four bushels per day,—two in the morning and two at night. Others had followed his example, and were greatly pleased with the result.

Mr. Sprague referred to Mr. Brooks's statement of keeping cattle on short feed, in order to make the bones grow, and said he would like to see that gentleman's cattle and his barn. He could remember when it was the practice to keep cattle much out of doors in winter, and feed them on salt hay, some contending that it was necessary, in order to make them hardy; but they came out poor enough in the spring. In his opinion, if we want good cattle, we must feed them well, and keep them from the cold. All good authorities in stock raising agree on these points.

Mr. Brooks replied that he merely expressed a doubt whether such a system might not be a good one. He thought it a question whether, when feed is as dear as it is generally with us in winter, it is not best to let the flesh fall off, and put it on again when feed is cheap. Not to starve the stock, but to keep them in comfortable condition. He considered it a question whether high or low feeding was the most judicious, and for that reason he was trying the experiment.

Mr. Sheldon, of Wilmington, remarked in regard to feeding stock, young cattle might be fed too highly, if it was intended to keep them to old age; but he thought the failure in nine times out of ten was in not feeding them high enough. As to breeds of stock, in looking back to the oxen he had owned, and noticing those he considered the smartest, he found that the Ayrshires were the

best on the foot, while the toughest resembled North Devons. He thought North Devons and Ayrshires might be selected through the country, from which a good stock might be reared in a very few years. He did not think that imported cattle would do so well as the second, third or fourth generation of their descendants.

Mr. RUSSELL, of Pittsfield, was of the opinion that it would require a long period to get up a race, and referred to an improved breed of sheep which had been in the course of breeding by a gentleman in Germany since 1811. They now surpass anything in this country for wool. He thought that failures to secure good stock were often produced by the sires, and should prefer those which come from good milking stock. Until a good race of milkers is produced, he thought the best course to be pursued, was to purchase native stock, selecting the best animals and rejecting all which did not prove good. He was now pursuing this plan, and thought that in eight or ten years he should have a better dairy stock than he has ever had.

GARGET IN COWS.

MESSRS. EDITORS:—At the solicitation of a friend, who has saved a valuable cow from the hands of the butcher, I am induced to make known through your columns a remedy for the *Garget*. Some years since, I met with a fine imported Durham cow, on the way to the butcher, the owner parting with her in consequence of her being afflicted with the garget. The owner had tried all the usual modes of eradicating the disease, after which he put her under charge of a distinguished Veterinarian, who, after a six-months' attendance, discharged her as *incurable*.

Deeming her a good subject for a treatment with iodine, and not knowing whether it had been used in the case, I purchased her at what she was worth for beef. At that time she gave but a few drops of milk at a time from one teat, the other three having ceased to yield any—the udder and teats were swollen and hard. I determined to make use of iodine in the form of hydriodate of potash, being solvent in water, and if it failed to exhibit its effects on the system, I would resort to an ointment, (20 grs. iodine to 1 oz. hogs lard,) applied externally, to the udder and teats. I commenced by giving 10 grs. of hyd. potash in a table spoonful of water, three times a day, mixed in a mash of shorts or meal; and though the dose was unusually small for a cow, still as it was giving unmistakable signs of effect,* I did not increase the dose. In seven days she gave milk freely from each teat, and in three weeks she was discharged as cured. The result in the foregoing case was so favorable, that I advised my neighbors, who had cows afflicted with the garget, to make trial of the same remedy. I have known of its trial in at least forty cases, and in every one the cure has been effected with even the above-named small dose. A larger quantity could be used at a dose with safety.

Any one acquainted with the effect of iodine on the human system, knows its tendency to produce an absorption of the mammæ. Dr. R. Coats, Philadelphia, reports a case in the "Medical Examiner," of the complete absorption of the female breast from iodine; but the mammæ recovered their original developments after the lapse of a year. Iodine is principally employed in diseases of the absorbents and glandular systems. (See U. S. Dispensatory.)

Hydriodate of potash can be procured of any apothecary, and dissolved so as to allow 10 grs. to each spoonful of water, increasing the doses till it gives effect on testing the urine.

Dedham, 1854. EBEN WIGHT.

Boston Cultivator.

* Hydriodate of Potash passes quickly into the secretions, especially the urine. It may be detected in the latter by first adding to the cold secretion a portion of starch, and then a few drops of nitric acid, when a blue color will be produced.

For the New England Farmer.

IMPROVED SUPERPHOSPHATE OF LIME.

MR. EDITOR:—Having during the winter of 1851–52, noticed several articles extolling very highly a fertilizing compound under the above title, and being in want of a concentrated manure, I was induced to make a trial of the same, in order to test its fertilizing qualities, believing that if it possessed one-half the virtues which it is claimed to be endowed with, it would be just the thing I wanted. I accordingly sent for, and obtained a bag of it.

Well, my first operation was in the garden, where I applied it freely to all sorts of vegetables, from the aristocratic corn-stalk down to the humble squash-vine, skipping alternate rows and hills, but never could perceive any difference in the growth.

Sometime in July I inverted a piece of sod which I sowed to turnips, and topdressed with the compound, omitting a strip across the centre of the piece, and although superphosphate of lime is known to be a favorite manure for turnips, there could not in this case be any difference discerned throughout the season, either in quantity or quality, between that portion which was topdressed, and that which was not. It is also said to be an excellent topdressing for grass lands; accordingly, after haying, I selected a piece of land, warm and dry, but so reduced in fertility as scarcely to pay for swinging the scythe over it. Two square rods were marked off, on one of which I sowed ashes at the rate of 40 bushels to the acre; and on the other sowed compound (for in truth I know not what else to call it) at just double the cost. The past season the ashed rod was marked by a luxuriant growth of clover and grass; the other by —four stakes—and nothing more.

Notwithstanding my experiments thus far were attended with results so unfavorable, I resolved to make another trial the following season on different soils and crops. Accordingly I applied it at the first hoeing to my corn and potatoes on alternate rows; and afterwards to common turnips, ruta bagas, and carrots, on reclaimed meadow land, with no better results than the previous season. Now I am driven to the conclusion that my soil must be very ungrateful, or, that the manufacturers must be deficient in conscientious scruples. The use of portable, or concentrated man-

ures, will no doubt add materially to the agricultural productions of the country. And no doubt many instances may be singled out where they have proved a profitable individual investment. But the existing high prices, together with the risk of getting a worthless article, renders it extremely questionable whether it will not, in the majority of cases, prove to be a whistle too dearly paid for. J. H. S.

Colebrook, Ct., Feb. 15, 1854.

THE SEASONS.

FROM THE GERMAN.

Hay and corn and buds and flowers,
Snow and ice and fruit and wine,—
Suns and Seasons, sleets and showers,
Bring, in turn, these gift divine.
Spring blows, Summer glows,
Autumn reaps, Winter keeps;
Spring prepares, Summer provides,
Autumn hoards, and Winter hides.
Come, then, friends, their praises sound:
Summer, Autumn, Winter, Spring,
As they run their yearly round,
Each in turn with gladness sing!
Time drops blessings as he flies—
Time makes ripe and Time makes wise.

For the New England Farmer.

FARMING IN NEW ENGLAND—No. 3.

Another serious obstacle to successful farming in New England, is, a *servile imitation of the ways of our fathers.* Reverence for antiquity is generally a virtue, but that unreflecting imitation of faults and excellencies of our ancestors, is neither consistent with good sense, self-respect, nor progressive improvement. In the vicinity of our cities and larger towns, we see much less of the evil to which I refer, than in the country. But we need not go very far into the interior, even of Massachusetts, before we shall find melancholy evidence that farming is still conducted very much as it was a hundred years ago. What our fathers did from necessity, we continue from habit. Though the hum of industry is heard around every waterfall, and smiling villages have sprung up, as it were by enchantment, on those rocky and forbidding sites which our fathers thought were "made only to hold the world together," the old farms in the vicinity look as they did half a century since, only a little more desolate from year to year. The house is as innocent of paint as it was the day it was "finished." On one side of it, the builder was just three clapboards short, and they have never been supplied, and the lining boards have always been, and still are, visible to every passer by. Two or three panes of glass were not set in one of the windows, and their places, together with those which "the children" have created in other parts of the mansion, are filled with old hats and worn-out comfortables. The brackets which were used for shingling the roof, stand there still, to answer the treble purpose of exciting the mirth of the traveller, awakening the mortification of every person of taste, and of saving the carpenter the trouble, (if perchance they do not become too rotten,) of putting on others, when the house is shingled again. Instead of a neat and easy-working pump, the old, crazy well-sweep hangs there yet, creaking in the wind, supported by a crotch leaning at an angle of forty-five degrees with the horizon, and creating an antagonistic combination of forces, which works in all possible directions but the right one:—the whole concern seeming to have been contrived for the especial purpose of taxing to the uttermost the strength and patience of the "good woman," and of setting at defiance every principle in mechanics, and all possibility of drawing water. One consolation, however, is left to the mistress of the house—the bucket is so old and leaky, though she fills it full at the bottom of the well some forty feet deep, by the time it reaches the curb, half of the water has run out, to the sensible relief of her *present*, if not of her *future*, muscular exertions.

A stream of liquid manure runs from the barn-yard into the road, furnishing ammonia *gratis* to all who pass by the premises, but making lean pork for the owner next winter. His cows would be alarmed at the sight of a turnip or a carrot, and the strong probability is, that it will take more than "four quarts of their milk to make a pound of butter." Like the editor of one of our agricultural papers, and as his own father did before him, he throws his manure from the lean-to out into the open air, that it may be thoroughly washed and cleansed and dried, before he applies it to his delicate acres. His barn has no cellar, his pigs no shelter. He raises corn, or rather stalks, on the same land, for four successive years. His meadow is not drained, nor his upland favored with a coating of pulverized muck. His farm is growing poorer year by year, and he would gladly sell it and "move to the West." He wonders why he does not get along as well as his neighbor Thrifty, whose buildings are painted, whose barns and storehouses are full, and whose cattle cover the surrounding hills. He works as hard as his neighbor, but after all, things will go the wrong way with him. He is short of money and wishes to borrow, while Thrifty always has some to let—to every body but him.

Now, there is neither poetry nor caricature in this representation, but simple sober truth; and if it should chance to fall under the notice of any tiller of the soil, who is conscious that he sat for the picture here sketched, I would in all seriousness ask him, whether his want of success is not to be attributed to his following *the beaten track of his fathers?* Do you not cultivate the acres they did, *in precisely their way?* Have you taken the pains to inform yourself, whether some at least of the alleged improvements in farming of the present day, are not real, substantial, improvements, and worthy of your imitation and adoption? Do you take, pay for, "read and inwardly digest" the "*New England Farmer*," and keep yourself well posted up, in regard to the progress which agriculture has made within the last twenty years?

Waltham, Feb., 1854. D. C.

Remarks.—If we had not seen, with our own eyes, the very evils which our correspondent names, we should certainly feel inclined to consider his assertions as extravagant. But it is scarcely a week since we saw a farmer's barn-yard, and that, too, where all the droppings are thrown *into* the yard, literally swept by the dissolving snows, and not only "*a stream* of liquid manure," but *many streams*, coursing their joyful way across the yard

to the brook below! With the merchant, a case, parallel with this wastefulness and folly of the farmer, would be to provide his year's stock of molasses, pay for it, and then draw the spigots, and suffer it to run into the gutters and streets. Every observing traveller must have noticed the instances of shiftlessness which are recited above. That there has been great improvement, "D. C." will allow; but his argument is, that more is demanded, and that because it is not made, is one principal cause of the want of success.

SOLID AND LIQUID EXCREMENTS OF ANIMALS.

It has frequently been suggested by writers on agriculture, that the liquid excrements of animals are a most energetic and efficient fertilizer; but very few, if any, have been at any trouble to inform their readers of what they are composed. Chemical analyses have been made of almost all the articles used as agents of fertility, and we now submit the following tabular exhibits, showing the components of five of these, viz: cow dung, horse dung, cow urine, horse urine and human urine.

Cow dung—the animal being fed on straw, leaves, hay and potatoes, contained, in 100 parts, when fresh—

2.2 bile, in a state of alteration.
8.3 mucous, &c.
14.1 non-digested (crude) vegetable remains and ashes.
75.4 water.

HAIDLEN's analysis of the ashes, gives six per cent. They were composed of the following ingredients:—

Phosphate of lime	12.9
Do. magnesia	10.0
Perphosphate of iron	8.5
Carbonate of potass	1.5
Sulphate of lime	3.1
Silicic acid	63.7
Loss	.3
	100.0

Of horse manure, (the animal being fed on oats, straw and hay,) 100 parts contained:—

Biliary matter, and coloring matter in a state of alteration	3.7
Mucous, (crude,) &c. &c	6.3
Non-digested vegetable remains and ashes	20.2
Water	69.8
	100.0

The ashes was six per cent. Their constitution, according to the analyses of JACKSON, was as follows:—

Phosphate of lime	5.
Carbonate of lime	18.75
Phosphate of magnesia	36.25
Water	40.
	100.00

Of horse urine, according to VAUQUELIN, 100 parts contained,

Carbonate of lime	1.1
Do. soda	0.3
Hippurate of soda	2.4
Hydrochlorate of potass	0.9
Urea	0.7
Water	94.6
	100.0

Cow's urine, analyzed by BRANDE, gave hydrochlorate of

Potass. and ammonia	1.5
Sulphate of potass	0.6
Carbonate of potass	0.4
Phosphate of lime	0.3
Urea	0.4
Water	96.8
	100.0

Human, analyzed by BERZELIUS, gave in 1000 parts,

Urea	30.10
Lactic acid	17.14
Uric acid	1.00
Mucous	0.32
Sulphate of potass	37.61
Do. soda	0.00
Phosphate of soda	3.16
Do. ammonia	2.94
Hydrochlorate of soda	1.65
Do. ammonia	4.45
Phosphate of magnesia and lime	1.50
Silicic acid	1.00
Water	933.00
	1000.00

In consequence of the quantity of sulphate of soda not being carried out, the figures in the last analysis appear imperfect. The table is given, as published, however, and will be sufficient, we presume, to demonstrate most conclusively that urine is much too valuable an article to be neglected, or suffered to run to waste. By taking proper measures for economizing it, and mixing it with muck, mould, rotten wood, or indeed, with any substance of an absorbent nature, and applying it to our crops, we shall find that it will always be productive of eminently beneficial results. It is not, however, judicious to apply it in its crude state, a certain degree of fermentation being essential to the development of its fructifying energies which depend upon the putrefactive process. In irrigation, both urine and soap suds possess great value. Both articles contain the food of plants in a state of solution, and therefore in a condition to be immediately appropriated by the vegetation to which they are applied.

For the New England Farmer.

HOW TO MAKE THE BUTTER COME.

MR. EDITOR:—In the last week's *Farmer* the question is asked, "why don't the butter come?" I would answer that question by stating the plan I have adopted to make it come quick. The cream is put into tin pans, and placed on the stove with a moderate fire; I then commence stirring it slowly in order to have it warmed alike in all parts of the pan. As soon as it feels neither hot, nor cold, by putting in the finger, pour into the churn. In from 5 to 15 minutes the butter will come. I have tried this plan for the last two winters and it has not failed once to bring the butter in the above time.

I have tried, or seen tried, almost all kinds of churns, from the old dash and barrel, of bye gone days, down to the late "*double acting atmospheric*" humbug, and am satisfied in my own mind that there is no great difference in most of them, so far as the labor of churning is concerned.

J. G. GRIGGS.

Centre Rutland, Vt., 1854.

IMPROVEMENT OF THE DAIRY.

The attention of the reader is called to a letter from the President of the Middlesex County Agricultural Society to the Trustees of the Massachusetts Society for promoting Agriculture, and the reply of the Trustees. The proposition, it will be seen, has been responded to by the Massachusetts Society with that efficient liberality by which it has always been distinguished whenever satisfied that the use of its funds would promote the interests of Massachusetts farmers. The movement is well-timed, and in the right direction. The premiums are sufficiently large to attract and justify the attention of our most skilful and intelligent dairymen, and the result must be highly beneficial. We cannot refrain from expressing our obligations to the mover of this experiment, and to the Trustees, for their appreciation of its merits, and liberality in carrying it out.

For the New England Farmer.

MY COUNTRY HOME.

"The country for my home—the city for my visiting place," said I in my girlhood. "Poh!" said my farmer uncle, "what do you know about the country, whose only experience has been the few short weeks of a summer's vacation?" But I fancied that as I had the taste to appreciate the beauties of country life, so I had sense enough to get along with its trials,—indeed, methought, after all, these could not be so very much greater than those pertaining to city life.

After awhile I spent a winter in the country. Now surely upon such experience had I not a right to my say about country life? But my more thoughtful aunt would not allow that I yet had the right or rather the ability to choose impartially. "It may be very nice," said she, to visit in the country free from care, with nought to do but read and write from morn till night, or walk or ride or visit at the convenience and pleasure of your own will; wait till you have lived in the country and kept house there." Now the country has been my home for a whole six months—not summer months all, either. I've had a cow and a pig and some chickens. If this isn't country experience, I know muddy carpets and a mud bespattered husband is! Have I not yet reached the point of impartial judgship—the right to my own wise opinion, unfettered by all these ifs and ands and buts—though they do chance to bear the weight and authority of emanating from older and wiser heads than mine? Perhaps my good friends will say "O, your six months has been only a sort of village country life. Wait till you have made your home—that farm which is now in all its pristine beauty—just as the Red Man left it."

The woodman's axe and the brush scythe are producing quite a civilized look on that farm, I assure you. But if you choose, I will waive the question, or rather its decision, till I have had a few years' experience upon the new homestead.

An old lady, thinking I could hardly reconcile such a life with my city habits, opened her eyes in astonishment at the pleasure I expressed in prospect, "Why you don't say,—well I s'pose you like posies, and there's plenty on 'em, I guess, up in them woods."

O, if ——— and ——— should see me ensconced in that little cottage, which is already modestly peeping up in the centre of the clearing, far away by the roadside, with rail fences about and plenty of stumps all around, would they denounce the taste that held me contentedly there!

I manage to find almost as much happiness in anticipation and memory as in reality. So I look into the uncertain vista of a few succeeding years. I see in front of the wee house in the grove reserved for that especial purpose, a pleasant and commodious mansion, where are gathered the many little comforts and some luxuries that tend to make home happy, and the carrying out of social hospitalities, a pleasure unalloyed by the fatigues of inconvenience. I would have a winding carriage way from the road—through smooth shaven lawns—and there should be clumps of shrubbery and ornamental shade trees. I would have a hedge row, or at least, neat fences should displace the unsightly rails. Wide spreading boughs should o'ershadow the extent of boundary along the roadside. The garden, with its vegetables and small fruits, should be such an one as only an imaginary garden could be. On the hill-side, orchards with all the improved varieties of fruits. Vines rightly trained should yield their teeming stores. Animals of the "best improved" should dot the pasture grounds. An occasional field of grain should come in by way of contrast and variety. I would have an enclosed verandah as a conservatory for exotics whose verdure and bloom would cheer the heart and charm the eye during those long winter months in our cold North West.

These are some of my dreams, rough sketched, that haunt my thoughts when in moments of musing reverie, I apportion and adorn those acres so rich in soil, so beautiful in location.

This is my home, as my hope and fancy paint it. What a sweet spot to rear my children. To dwell thus in the midst of natural beauty will surely tend to make them good if not wise.

In whatever portion of the world their after lot may place them, will they not ever treasure the sweet recollection of home? Round that little word will not bright thoughts ever cluster? "A thing of beauty is a joy forever;" then it is no trifling thing to rear a beautiful home, if by this means one inextinguishable ray of joy lights the hearts of our children through life. Our labor then will not be in vain. "Remembered joys are never past." Then though their whole after lives be darkened by some incurable sorrow or affliction, how fondly will they cling to these remembrances.

I know the difference between bright and pleasant memories, and those that are sombre and sad. Nought but the former would I bequeath to my little ones. If all pleasure in their after life should be taken from them, there would be that in their past, which would be to them sweet and never failing sources of pleasure. For this I would have them a home of beauty, not of splendor. If humble, it should yet possess attractions, which loving in their childhood, they should enjoy through life. Some poet has sung, "A sorrow's crown of sorrow is remembering happier things." It may be so with regard to some kinds of happiness but hardly true, I think, of the remembered happiness of a pleasant home and childhood.

"But," says one, "there's many a slip 'twixt the cup and lip," and you may never possess those good things of which you so fondly dream. It may be so. It is not impossible that all our sweet anticipations should be crushed. Everything is uncertain, but not for this should we cease working and hoping. If life and health are spared and no untoward events occur, we *must* we *shall*, the most of them. Thus strong is my hope.

I know the bounding, gleeful joyousness of my youth has passed. I may never again romp with the same childish delight through the woods—up the hills and along the valleys. Ah! well I remember how gladly I hailed those vacations. Once escaped from the decorous bearing seemly for a city miss, I was like an uncaged bird, wild in my unchained freedom. My strength might now prove but weakness should I attempt those long rambles, when I climbed the heights—descended the ravines in search of those beautiful things, the wild flowers. But other forms are growing up to take my place in these woodland rambles, and other hands may cull the "posies" of our bright prairie-land. While Mamma must consent to be content with the more passive enjoyments of country life and nature's beauties, and enjoy them through her children. ELSIE.

Waukesha, Wis.

REMARKS.—Thanks to "Elsie" for her favor. "Short sketches of life in the West," or "Incidents on the Prairies," will prove interesting to our readers. We hope to hear from you again.

MILK AND BUTTER COWS.

A statement is published, verified by a responsible name, of the product of milk and butter, of 14 Ayrshire cows, the property of EDWARD M. SHEPARD, of St. Lawrence county, New York, which is worthy of being laid before our readers. It is, briefly, as follows:

Mr. Shepard, had 14 cows, Ayshires and their crosses on natives, half-bloods, six heifers *milking for the first time*—time, the third week in June—feed, grass only.

Allowing one cow for family use, and deducting 40 per cent. from heifers, and his trial stood thus:

Cows	8
Heifers 6, reduced to cows, is	3.6
	11.6
Deduct one cow for family, is cows	10.6

The product for the week was 12 lbs. 12 oz. per cow, the first week in July, feed grass only, and much affected by drought, he milked twenty, eight of which were heifers, milking for the first season, and this trial stood thus:

12 cows, less one for family, is	11.
8 heifers, 40 per cent. off is	4.8
Full cows	15.8

The product for the week, per cow, was 14 lbs. 13 oz. and a fraction over.

But, lest you might think my allowance for heifers too much, which, however, is considered a just allowance by the dairymen of this country, the result of the last trial, without any deduction for their being heifers, was 12 pounds 5 oz. and a fraction per head, for the week.

SONG FOR THE SEASONS.

BY BARRY CORNWALL.

When the merry lark doth gild
With his song the summer hours;
And their nests the swallows build
In the roofs and tops of towers;
And the golden gorse-flower burns
All about the waste;
And the maiden May returns
With a pretty haste;
Then how merry are the times!
The Summer times! the Spring times?

Now, from off his ashen stone,
The chilly midnight cricket crieth;
And all merry birds are flown;
And our dream of pleasure dieth;
Now, the once blue laughing sky
Saddens into grey;
And the frozen rivers sigh,
Pining all away!
Now, how solemn are the times!
The Winter times! the Night times!

Yet, be merry; all around
Is through one vast change revolving;
Even night, who lately frown'd,
Is in silver dawn dissolving:
Earth will burst her fetters strange,
And in spring grow free:
All things in the world will change,
Save—my love for thee!
Sing then, hopeful are the times!
Winter, Summer, Spring times!

BUFFALOES.

A member of Governor STEVENS' northern route exploring party, in a long communication to the *St. Louis Republican*, written from the head of Yellow Stone, relates the following among many other "sights and incidents" of the party thus far:

On Sunday, after a march of some ten miles, the buffaloes were reached. They were before and on each side of the train. For miles ahead it seemed one vast drove yard. They were estimated by some as high as 500,000—200,000 is considered a very low estimate. Drawing up the train at our usual halt at noon, a large herd were about half a mile ahead. The hunters, six in number, were immediately despatched, well mounted, on spare horses reserved for that especial purpose, and the whole train had an opportunity of witnessing a buffalo hunt. The hunters dashed in among the herd, picked out the fattest of the cows, and then separating the selected ones from the herd, soon despatched them. In less than an hour the wagons were sent but a small distance from the route to receive the choicest pieces of the buffalo.

In the next two days' march the hunters were kept some distance ahead, to keep off the buffaloes; it was the only way the safe passage of the train could be insured through the sea of flesh. The pack mules and spare animals following on in the train, too numerous to be separately led, were hard to control; and despite every precaution and care, one horse and four mules were lost, they getting mingled with a herd of buffaloes. Every effort was made to reclaim them—hours spent in their attempted recovery. The efforts were entirely useless.

SPIRIT OF THE AGRICULTURAL PRESS.

HORTICULTURE.

"The taste for Horticultural pursuits," says *Hovey's Magazine*, "is steadily becoming more extended. Wherever a town or village is settled, even in the remotest sections of our wide country, there may be found neat gardens, filled with the better varieties of our fruits. * * * The great West, where, a few years since, native seedling apples comprised the principal fruit, now claims only a secondary place in the variety of pears, peaches, cherries, &c."

There are, comparatively, few farms now, that are entirely without some of the better sorts of fruit. All, we trust, have gone beyond that point, when an abundance of the common cider apples satisfied their wants. Most farmers now have a small variety, at least, of the apples suited to the different seasons, and so coming into perfection as to afford a supply from September to April.—And they are not willing to stop with this, but carefully cultivate the plum, peach, pear, and some of the smaller fruits, the strawberry, currant, raspberry, &c. The cultivation of these soon begets a stronger love for the garden, and thus this delightful appanage of the house has found favor with the farmer, and given a new aspect to rural scenery. The quarter, half, or whole acre, is now often seen filled with choice fruits and vegetables and tended with considerable skill and care.

FLORICULTURE.

The same writer says, "if the taste for the culture of plants and flowers has not kept pace with that for fruits, it has still made a good advance, especially in the out-door or hardy department of ornamental gardening."

House plants and flower gardens are evidences of taste and refinement. The sweet-scented geranium, or a delicate rose, would hardly be expected in the parlor of an irascible woman, or the daffodil, coreopsis, or mourning bride, in the garden of a rude, ignorant and unfeeling man. But if placed there by some friendly hand, they would gradually root out the perverse spirit and kindle in its place sentiments of good-will, affection and love. Children, reared among flowers, will feel their kindly influences. That ferocity among boys to torment dogs, kill cats and destroy birds, will be tempered into a healthful principle of self-preservation, by engaging in the cultivation of beautiful flowers.

An encouraging feature among the farms is the prevalence of more, and better gardens, in which each has its well-defined limits devoted to a variety of annual and perennial flowers. Here the mother and her children control the operations; and while they cultivate the delicate plants springing into life and beauty around them, they also cultivate the graces which shall adorn them more than all that wealth can give. In their garden conversations, too, they excite such a love in each other for the beautiful and good, that their whole lives are tempered by the sweet influences of these fresh and impressive employments upon their ductile hearts. So, cultivate the flowers.

WHAT SHOULD THE STATE DO FOR FARMERS?

Such is the significant question asked by the *Farmer's Companion*, published at Detroit. "If the government," it says, "by establishing an agricultural school, can make us better farmers, so that every acre of land yields annually ten dollars, where now it yields five, then we hold it to be the duty of government to establish that school—with our own money, remember—for all the government's money comes out of our pockets." It then adds, "in 1850, we had 2,000,000 of acres under cultivation in this State. Who doubts, that if the farmers were as well instructed in their business as the engineer is in his, we could not just as easily make our farms yield at the least $2 an acre more, yearly? * * * It has been thoroughly proved in Europe, and well proved in America, that *thorough drainage*, on the average, adds *thirty per cent.* to the crops. In 1850, we raised 5,000 000 bushels of wheat; drained land would have given us 7,500,000 bushels, equal to as many dollars. But as individuals we have not the capital to drain our lands." We cannot here, give the reasons for these opinions, but entirely agree with the *Companion*, that the government of every State may do something for its agriculture which will shortly come back to its treasury in a three or four-fold degree.

MANURE, (*not sermons,*) IN THE STONES.

The *Farmer and Artizan*, published at Portland, Me., MARCIAN SEAVY, editor, contains an address by Doct. N. T. TRUE, before the Cumberland County Agricultural Society, which is full of striking truths. It says:—

"Almost any granite quarry contains all the mineral elements, and nearly all in the right proportion, to form a good soil. Could, then, a piece of granite be completely crushed and pulverized, it would, at once, form the mineral basis of a good soil; and this really is the manner in which your soils were originally formed. But it is necessary that the elements which compose such a soil be in a perfectly soluble condition before they can become food for plants. This is effected by the influence of one element on another."

HOW NATURE RENOVATES A WORN OUT SOIL.

"In this connection, let me call your attention to one of the processes that *nature* adopts to *renovate* a worn out soil; she makes use of a rotation of crops. Suppose we visit the plains in Brunswick, where there is but little potash in the soil. Well, what is going on there? Nature has planted there during the present century, at least, the

pitch pine (Pinus rigida) for the unmistakable purpose of renovating that miserable soil;—a hard case, gentlemen, but nevertheless true. These trees send down their roots in some instances, it is said, to the depth of seventeen feet, and bring to the surface the potash and other elements. But does this tree deposit its potash in its wood or bark? By no means—the wood of the pine requires but little potash, but it carries it *through* the tree into the leaves, which require a large proportion of that element. These leaves fall every year and assist by annual acquisitions in the formation of a new soil, so that even on the unpromising sand plains of Brunswick and other towns, you will find nature slowly, but surely at work, forming a suitable soil for some other crop, which in the lapse of ages she may see fit to introduce."

HOW DEEP SHALL WE PLOW?

"Let me ask how many of you have ever made trial of the subsoil plow? Or, are you willing to suffer the subsoil to remain as hard as granite for fear your manures will be wasted? A great mistake, gentlemen. Manure cannot descend out of the reach of roots of plants in any soil worth the cultivation. Plow deep and manure accordingly, and you double the number of acres you cultivate.

"I see the countenance of an intelligent and successful farmer kindling up, and seeming to say, 'I plow deep, sir.' Right, my friend; go home, and if the subsoil be anything besides a pure, coarse gravel, or sand, plow deeper yet. Much of the land in this county will bear plowing to the depth of eighteen inches. Exceptions, I am aware, exist, but they are much fewer than is generally supposed. If you expect to obtain a crop with a very little manure, then plow shallow, manure shallow, sow shallow, and reap shallow.

Some of the happiest and most independent men in the land, or in the world, are to be found in New England, who possess but a few acres of land, yet who keep it in a high state of cultivation. It costs such a man not half so much for seed, for labor or for taxes, as he who half cultivates double the number of acres. By deep plowing you bring within reach of plants a fresh soil which has not been exhausted of its potash, lime and other elements which are readily soluble, and easily controvertible into food for plants."

WHERE SHALL WE COMMENCE IMPROVEMENTS?

The "*Soil of the South*" Columbus, Ga., in its salutations to its readers at the opening of the year, has some excellent words which are applicable in this region. It says:—"The wear and tear of the last quarter of a century, upon the new lands of the south, has in it a lesson of no doubtful import. What will be the effects of a continuance of the same operations for a like period to come, needs no prophetic skill to tell. Need we persist in error, just for the privilege of having that many more steps to retrace, or shall we resolve now to commence the reformation?* * * *It will have to be made.* We cannot much longer give up all the time and labor, to cultivate and gather the crop; but to improve the land must claim a fair share of attention also."

SHORT CROPS IN ENGLAND.

The *Farmer's Magazine*, (England,) for December, estimates the wheat crop in the United Kingdom at about *two-thirds* of an average. To cover this deficiency some *thirty-two millions of bushels* will be required, which added to the average imports of good seasons, for the consumption of 1854, will probably amount to the enormous quantity of *seventy millions of bushels!* Our farmers should not entertain the fear, for a moment, that the market is to be overstocked in any of the staple crops. On the contrary, there never has been a time when their prospects of a fair reward for their labors were better.

HOW TO BEGIN THE NEW YEAR.

The *American Farmer*, published at Baltimore, in its budget of suggestions at the opening of the New Year, says:—"In commencing a new year, you should so arrange your system of farming, as never to be at a loss throughout the season for what next you are to do. Make it a point of duty not to cultivate more land than you can cultivate well. Let not the ambition of being considered a large cultivator induce you to overcrop yourself. One acre well manured, well plowed, harrowed, and rolled, if well tended afterwards, will produce more than three where these things have been omitted. The more noble ambition for agriculturists, is that which excites the desire not only of being considered, but of being in reality a good culturist, of so cultivating his land as that, while it yields abundant harvests, it may be gradually improving in its productive capacities."

But we must pause here, though having referred to a few only of the valuable journals upon our table. They abound in highly scientific and instructive articles, as well as the practical details of the art. We regret our inability, from want of space, to copy more frequently and extensively from the pages so ably and usefully filled, and from which we are daily instructed.

The careful reader will notice by the above extracts that there is great activity of mind among the farmers; because, if it is found *in the agricultural press*, it is the *farmer himself* who incites it by his increased intelligence and interest in the occupation.

HOW I SAVED MY CURRANT BUSHES.

On returning home after an absence of a couple of years, some four years since, I found my currant bushes, which were in rows on the outside of my garden, overgrown with witch-grass, and was informed by my better half that she could not welcome my return with a glass of currant juice, as her bushes had yielded but a very few currants the season past. I could not think of losing them, as I was too fond of their fruit, and besides, they had cost me much labor. Digging them up and rooting out all the grass was too great a task, therefore I thought I would try and smother it out. I

covered the earth around them to the depth of two or three inches with tan bark, putting some half a dozen shovelfuls into the centre of each bush. It operated to a charm,—the grass was exterminated, and the next season I spaded in the tan bark, and since then my bushes have yielded bountifully. I am satisfied that vegetable dressing is equally as good, if not better, for trees and shrubbery than barnyard manure, which I save for field dressing.

Topsham, Nov., 1853. D. P. H.

Maine Farmer.

CARROTS FOR HORSES, MILCH COWS, &c. &c.

BY ONE WHO HAS HAD THOROUGH EXPERIENCE.

The value of the carrot as an article of food for horses and milch cows in winter and spring, is very far from being universally appreciated, else its culture for that purpose would be more general. There is nothing grown by the farmer that yields more abundantly in proportion to the labor, nor is there a production of the soil that will furnish a greater amount of nutriment to the acre than this root, for the use above named. They are a most admirable food for horses, in winter and spring, as they possess the peculiar qualities necessary to promote health and vigor in the animal during the period of the year when there is no grazing. They are, indeed, they best known substitute for grass, as regards horses, and if given in sufficient quantity, with as much straw and salt as the horse chooses to consume, will keep him in as fine condition in every respect. A medium sized horse requires from two to three pecks a day, when standing in the stable, and an additional peck when put to labor; though if the labor be very severe and constant, corn meal may be profitably added. (*a.*) One hundred and eighty days, or from Nov. 1st to May 1st, is the average time during which there is no grazing. A horse will, in that time, if put to hard labor, and fed upon straw and oats, consume at least ninety bushels of the latter, or half a bushel a day; and thirty bushels peracre being an average yield, it requires three acres of ground to produce the amount. Now for the carrots. One thousand bushels per acre is less than an average crop when properly cultivated, (though I have grown at the rate of two thousand, on highly manured ground,) and two bushels of them contains rather more nutriment than one of oats; therefore less than one-fifth of an acre of carrots is equal to three acres of oats! The expense of tillage for this fifth of an acre is about the same, all told, as for the three acres of oats. It also requires about double the labor to feed them, that it ordinarily does grain, as they should be chopped or cut with a knife, in small pieces, for feeding. But this additional labor, together with the extra cost of enriching the soil beyond the usual condition of oat-ground, is but little in comparison with the more than *fifteen hundred per cent. increase* of nutricious matter on the same quantity of land. Carrots are almost universally a favorite food with horses; but should one refuse them at first, an appetite is soon cultivated, and he devours them greedily. The effect of carrots upon horses always is, when fed liberally, a bright eye, a glossy coat, and an energetic, healthful appearance.

As a regular food for milch-cows, through the winter and spring, carrots are very valuable. They increase the flow of the milk, give it a delicious flavor, and always insure yellow butter in a *legitimate way*. They are, without doubt, preferable to any other root, all things considered, for cows giving milk through the winter, or for new milch-cows before grass. They are said to fatten on them, when boiled, much faster than on potatoes, and sheep are usually very fond of them.

Carrot tops, fed to horses and cattle in November and December, are worth their weight in good meadow hay, and an acre of them is equal to half an acre of ordinary meadow. (*b.*)

When the enormous yield of this root, and its value as a healthy diet for stock in winter is duly considered, it is somewhat surprising that its culture is so generally neglected, especially by those having but a few acres. Every farmer and kitchen gardener knows how to raise a bed of carrots for family use, and they have only to enlarge their space and apply the additional labor, to extend the benefit to the yard and stable, and through them to their own pockets. L. H. W.

Phil. Dollar Newspaper.

REMARKS.—"Two or three pecks a day" would probably "scour" any horse so that he would be unfit for labor in one week. Unless the horse is very large, and fed mostly on dry hay, without grain, one peck per day will be found a liberal feed of carrots.

(*b.*) The term "meadows," used here probably means upland, and not, as with us, low ground producing an inferior quality of hay.

For the New England Farmer.

DOES COLD KILL THE PEACH TREES.

FRIEND BROWN:—Some years ago it was a popular doctrine that a certain degree of cold, say 12° below zero, would kill peach buds, but I did not believe it, as within the last few years the belief has become general that they were not affected by extreme cold. I have been examining my trees today (Feb. 22,) and have not been able to find a living bud, and for certain reasons I think they may have been destroyed by the extreme cold. Some time between the 28th of Nov. and the 10th of Dec., I was at work among my peach trees, and examined the buds on eight or ten trees, and found them all alive. About the 16th of Jan., 1854, I was pruning and heading in my trees, and examined again and fonnd them all alive. Sometime during the week commencing Jan. 29, I was at work again among them and found some dead buds, the most of them, however, were alive. Now they are all dead; and I find by looking at my account of the cold mornings that on Jan 25th the mercury went 12° below; 29th 17° below; Feb. 5th, 16° below, and Feb. 7th, 20° below. Now, as the ground has not been thawed, and no warm weather of any consequence has ensued, I can account for their destruction in no other way than by the cold. Yours &c. B. F. CUTTER

Pelham, N. H., Feb. 22, 1854.

SHOES.—Next to agriculture the shoemaking business is the most important and profitable pursuit in Massachusetts, and has the largest number

of persons engaged in it. The *Andover Advertiser* says that the aggregate value of boots and shoes manufactured in this State is $37,000,000, or more than that of all the other States combined—and far exceeding that of any other manufacture in the Commonwealth. About one-third of the above amount is shipped to New York, and the remainder is sent to the South and West, to California, the West Indies, South America, Australia, the Sandwich Islands, England, and the European continent. Lynn is more extensively engaged in this business than any other town, making nearly five millions of pairs annually. Then come in succession Danvers, Stoneham and Grafton. In the latter town, a single manufacturer uses one hundred bushels of shoe pegs every year. The pegs used in this immense business are mostly made in New Hampshire; they are cut by machinery, and one firm manufactures fifty bushels per day. Machinery is also now used to a considerable extent, for sewing and stitching the leather.

CARROTS vs. CORN.

Mr. Editor:—Reading in No. 3 of the present volume of the *Farmer*, the report of committees on crops of the Kennebec Co. Agricultural Society, led to some thoughts about carrots. Which is worth the most, an acre of carrots or an acre of corn? I see Mr. May raised 199 bushels of ears of corn, which he reckoned at 50 cts. per bushel, amounting to $99,50. He estimates the cost of plowing, planting, hoeing and harvesting, at $26,50, but makes no mention of the fodder.

Capt. Foster raised on one-eighth of an acre 130 bushels of carrots, which he sold for two shillings per bushel. This is after the rate of 1040 bushels per acre, which, at the price the Captain sold for, amounts to the sum of $346,66. He estimates the cost at $10, making $80 per acre, which I think is about right, leaving a profit of $266,66. Now, Mr. Editor, any one can make figures for themselves. I think carrots are profitable roots to raise. We can raise more of them than any other root, and it is not so much work to raise them as many people think it is, till they try a few. I have raised carrots for three years, and like them much. I raised 60 bushels the past year, and am feeding them to my cattle (10 in number) one-half bushel per day, which is not 2 quarts apiece, and they do well on them and straw. I think I can winter a stock of cattle on oat straw (cut when the straw is about one-third turned) and one-half peck of carrots each a day, as well as on second quality of hay.

—*Maine Farmer.* Jona. S. Longley.

Benefits of Geological Surveys.—Three years ago the Legislature of North Carolina made an appropriation for a geological survey of the State. The discoveries of the first year developed the existence of copper and gold ores, drew to them the attention of capitalists, and have already increased the revenues of the State to five times the cost of the whole survey. In the second year, seams of the purest bituminous coal, some of them fifteen feet in thickness, extending through a region of some forty-five square miles, rewarded their investigations. It is estimated that every thousand acres of these seams will yield thirty millions of tons of bituminous coal of the best quality.

For the New England Farmer.

FARM IMPLEMENT FAIR.

Mr. Editor:—I had occasion last summer to address you respecting the introduction of the mowing machine. It has occurred to me that there is a kindred subject to wh ich it may be well to call your attention. I observe that you frequently notice the improvements in agricultural implements, and I consider this as something which gives peculiar value to your truly excellent paper. It is an interesting inquiry, how can these new inventions be most successfully introduced, so as to be properly appreciated by the farming community. They are not to be seen at our agricultural warehouses, nor at our cattle shows, nor yet at the Mechanic's Fair. We hear, indeed, that they are to be found at the Crystal Palace, some two or three hundred miles off, but for aught we know, they may never be any nearer, and that may be the first and last that we ever hear of them. Now I would propose to meet this exigency, that we have a Farm Implement Fair, in connection with a practical exhibition of the mowing machine. This movement may be thought to be a novel one, but it is not more so than the Horse Fair at Springfield, and it is believed that it is not less important.

The proposition of holding a national exhibition of horses, in connection with the Hampden Agricultural Society, was first made by George M. Atwater, in May last. A committee was then appointed to take the subject into consideration, as the society did not deem the object of the exhibition as coming exactly within their sphere, and out of the action of that committee has grown this grand exhibition, whose objects have been so generally appreciated and forwarded by the press throughout the country.

The horse has been called the great civilizer of man. That I deny. It was said with much more truth, "Wherever a man comes, there comes revolution. Man is the wonder-worker." The horse is undoubtedly a noble animal, but he can do nothing of himself. It is only when harnessed to human inventions that he becomes efficient. It is left to the skill and agency of man to increase his power, and make it available; it is by man's control and efforts, that he is made to aid in the great machinery of civilization. I certainly have no disposition to undervalue the capability of the horse, and while it is admitted that he is important in the progress of the arts, it cannot be pretended that the genius and efforts of man are less essential; indeed, I think that the pre-eminence of our rational nature over mere brute force, is clear and incontestible. Award then to man his just place in the march of improvement, and let him stand conspicuous in the great work of progress.

If then there is nothing in the merits of the case why a Horse Fair should have the precedence over a Farm Implement Fair, the question is, whether the demand for the latter has been or can be supplied in any other way. I have already stated that the implements in question are not to be found at our cattle shows. The farming utensils there exhibited, occupy but a small space. They generally consist of a plow, hoe, hay-cutter and apple-parer, and are crowded into a corner or six foot square. While every possible variety of fruit is spread out in profusion, agricultural implements form but a meagre and insipid part of

the show, and are almost overlooked or forgotten. How is it with the Mechanic's Fair? Here, perhaps, the farmers' department is better represented, but even here the display is mostly confined to the old and common tools of the farm, and there is little which from its novelty and importance invites attention. As a significant fact, I notice that the editor of the *Ploughman* states, that he expected to see a mowing machine at the last exhibition, but did not find one there.

It is not much consolation to know that they are to be found at the Crystal Palace. They are not accessible, visible or tangible to the great body of our farmers, and there is little reason to hope that they ever will be. Should we ever have a Crystal Palace in our neighborhood, they would probably come with it, but this is an event upon which we cannot calculate. If it should ever occur, it most likely will be in some remote period of the distant future. But while we cannot go to the Crystal Palace, nor bring it to us, we can transport a part of the mighty whole into our midst; we can gather that portion which most nearly concerns us as a farming community, and have a show quite as interesting to us professionally, as the Great Fair at New York.

And now if it is asked what is to be gained by the introduction of all this machinery, I answer, much every way. It not only multiplies the power of production, but at the same time diminishes its cost. Take Ketchum's Mowing Machine, for example. In the ordinary act of mowing, the motive power comes out of the man; he has emphatically to put his shoulder to the wheel, and make it go; but by the use of the machine, he is relieved from this exhausting toil; the labor is transferred from the man to the team. He is released from the wear and tear of personal effort, he takes the place of an overseer, and at the same time is able to push forward the work five times as fast as he could do it himself. He thus saves himself, and saves time, and time is money.

The process of unloading hay is usually a slow and toilsome one. Pitched and mowed away as it commonly is with a fork, it will take two or three men fifteen or twenty minutes to remove a load. By the use of a certain apparatus constructed by Mr. J. A. H. Ellis of Rochester, New York, one man can do it as well in less than five minutes.

Ream's patent corn harvester is upon the same labor-saving principle. It will cut with the labor of a horse and boy, from sixteen to twenty acres of corn a day, and lay it in bundles all ready for binding.

Such are some of the triumphs of genius. Great as they are, they are but a specimen of what has been achieved in the improved implements of the farm. A correspondent of the *Ploughman*, in his observations upon things at the Crystal Palace, remarks, "If we were to judge from the number of labor-saving implements, and the recommendations, we think our farms might be carried on with fewer Irishmen than they are at present. Undoubtedly many, perhaps a majority of them, are adapted to some sections of our country, and are a great saving of labor."

In the scarcity of farm laborers, Irishmen are, with few exceptions, the only men to be had, and they are generally raw hands, green in every thing in which we wish to find them efficient. If then the horse and the ox can be humanized by the magic power of machinery, so as to serve as a substitute for this precarious help, of which we know nothing, and upon which we cannot rely, why should they not have the preference? In the one case, we have a sure and never failing resource; in the other, all is doubt and uncertainty.

In view of these facts, I have been led to propose a Farm Implement Fair, to be held at a season when we can have a practical exhibition of the mowing machine. Taken conjointly, they would mutually lend attraction to the time and place. *I would have this Fair for the benefit of inventors.* It is not to be supposed that individuals would bring their machines from distant sections of the country, without some consideration. No one could afford to do it at his own charge. *Now it is believed that the sale of tickets for admission to the show for two or three days, would secure an ample fund to meet this contingency,* and gratuities might be awarded by an examining committee, which would operate as a bounty upon the products of American genius. I was happy to find that the President of the United States alludes to this subject in his late message to Congress. "I commend to your favorable consideration the men of genius of our country who by their inventions and discoveries in science and art, have contributed largely to the improvements of the age, without, in many cases, securing for themselves anything like an adequate reward." It is only by a just and liberal patronage, that we can stimulate the best minds to labor in the wide field of invention.

Aside from the practical advantages of a Farm Implement Fair, it would be a museum to every curious and inquisitive mind. It would be a high day, a great day, for the place where it should be held. Is it asked where shall we hold it? I would answer at Concord. There the Agricultural Society have a building suitable for such an exhibition, and the warm and generous spirit of the people afford ground to hope that they would give a hearty response to this movement. You, Mr. Editor, are a Concord man, you move in a circle of influence which gives peculiar weight to your opinions and efforts. If, then, what I have advanced in this communication, meets your views and wishes, I hope you will have the frankness to say so, and if not, as a committee of ways and means, I trust you will suggest some other method by which the same great object can be better accomplished. A.

Acton, February 1, 1854.

Remarks.—We most heartily concur with the opinion so succinctly and earnestly expressed by our intelligent correspondent. Our County Show has been sadly deficient for several years in the number and variety of Farm Implements presented. As a single item of encouragement to our friend, we will say that we have engaged a Mowing Machine, and intend to use it in our neighborhood during the next haying season. We hope his suggestions will induce some action on the subject.

Vegetable Mechanics.—There is a remarkable tree on the farm of the late Hon. Olney Ballou, of Cumberland, R. I., which is an emblem of himself in his struggles against the obstacles of life. An

old elm standing near a mass of rocks, died. A young elm then appeared in a fissure of this rock, casting down its slender roots, and in twenty or thirty years, it has become a foot and a half in diameter. Its roots have penetrated into and under the rock, and have lifted and thrown off about seven tons of it, and have loosened and partly lifted ten tons more, which in a few years will be separated from the mass. The roots to bear the immense pressure upon them, have become changed from the ordinary appearance, and have a tough casing which may be compared to the skin of an alligator. The provisions thus made by nature for the growth of the tree under such difficult circumstances, furnish a striking specimen of what may be called vegetable mechanics. The greatest wonder is that the roots could grow and expand under such a heavy pressure of hard substance.—*Providence Post.*

For the New England Farmer.

THE "APPLE MAN'S" STORY.

FRIEND BROWN:—As you have honored me by the title of "Apple Man," and seeing not long since an article in the *Farmer*, giving an account of my fruit crop, the last barren season, I thought it might not be amiss to give you a few more particulars respecting the same. The lot of land on which my buildings stand, contains between 8 and 9 acres, about 7½ of which I cultivate; planting or sowing, where it is not too shady, except a small patch where I keep a cow. The amount realized from my fruit and other crops was, as near as I can calculate, for apples, $625; pears, quinces and cherries, $165; strawberries, raspberries and currants, $115; vegetables and fodder, $120; sum total, $1025. The quantity of manure used, I think would fall short of five cords. I plow late in the fall, after the leaves drop from the tree. Use the plow and cultivator in summer to keep down the weeds, where it is not planted. I think all the labor performed in raising and marketing, I could have done myself (although 61 years of age,) with the exception of paying out to children twenty or twenty-five dollars for picking strawberries and peas; and considered it a pleasant and healthy exercise too. I have found by long experience that any kind of business whatever, which we choose to pursue for a livelihood, or gain, requires *perseverance* and *economy*. We should always count the cost before entering into any branch of industry, in order to make us happy and prosperous.

When I purchased my farm, my principal object was the cultivation of fruit. I have given strict attention in pruning and grafting and have cultivated about thirty varieties of apples; some of them are seedlings selected from different towns, in order to test their qualities and productiveness. Some of them you have had an opportunity of seeing and testing, my Red Favorite particularly. The Baldwin, I think, is the standard apple as yet, although somewhat depreciated; the Hubbardston commands a higher price, but will not keep as long. Now, sir, as I am located near good markets, my advantages for selling fruit have been extremely good, therefore, my business thus far has proved to be a profitable one. I have had many doubts with regard to overstocking the market with fruit. One year ago the market was glutted with apples. If there is nothing to blast the crop in the future, I see no reason why the market may not be overstocked again, therefore, farmers who live in the country, distant from market, who do not possess the knowledge required for cultiviting fruit trees, I think their money and time (as the markets now are,) would be better appropriated to the raising of neat stock, and other country produce. A man bought of me last season 750 scions, and hired them set. He says there is not more then one in twenty which are alive. This is one instance, out of many, where money and time have been thrown away and trees very much injured. I would, however, recommend the grafting and pruning, fruit trees anywhere in the country, if it can be thoroughly done, so as to meet the approbation of the owners, in giving them their desire of the choicest fruits the country affords. N. P. MORRISON.

Somerville, Feb. 6, 1854.

REMARKS.—We have no fears that the market will be overstocked with *good* fruits.

FARMS IMPROVED BY KEEPING SHEEP.

To some extent, keeping sheep is found to improve a farm, as they consume much feed that is left by other stock and lost, and at the same time enrich the ground, and give it a better and smoother appearance. This is shown by instances quoted in the Transactions of the Norfolk Agricultural Society, which we relate in brief:—

A man having a small farm, formerly kept forty sheep, four cows and one horse, and had food enough for them the year round. The price of wool falling, he sold his sheep, and for a number of years has kept other stock altogether. He now keeps but three cows and one horse the year round, and pastures two cows extra through the summer, sells very little hay—not half enough to keep another cow; he has the same amount of pasture and mowing as when he kept the forty sheep in addition to his other stock, and yet his farm does not look near as well as then. He used to raise turnips among the corn for his sheep to eat in winter, and gave them besides, a few bushels of grain. The lambs, however, more than paid for his extra feed.

Another farmer for a great number of years kept about sixty sheep, eight or nine cows, (or other stock equal,) one pair of oxen and one horse. After keeping the sheep for a number of years, he found he could then keep as large a stock on his farm with the sixty sheep, as he could keep without them before; showing that they had improved the farm to furnish their own support. To stock a farm entirely with sheep would not be so profitable as to keep a limited number—yet it would pay as well as other stock. The object is to keep enough to consume that part of the vegetation peculiarly fitted to sheep, and which other stock will not eat, adding at the same time enriching elements to the pastures and yards by their manure. It is the opinion of many farmers, that pastures for other stock may be improved by keeping a small flock of sheep upon them a portion of the time, and the opinion seems fairly supported both by reason and experiment.—*Wool Grower.*

STEEL DOUBLE PLOW.

STEEL DOUBLE PLOW.

This plow has been well tested, and is coming into use very generally. We use it with satisfaction, and believe we can do our work easier, cheaper, and better, with it, on smooth land, than with any other plow. We take our description from Ruggles, Nourse, Mason & Co.'s illustrated catalogue. The double plow is not a new implement, as it has been used in England for many years; but these manufacturers have made important improvements in it.

"The forward mould-board is connected with the beam, and its depth of furrow is adjusted as follows: A substantial iron flange is fastened to the under side of the plow-beam by two bolts passing up through the flange and the beam and made tight on top by nuts and screws: the flange has two rows of slots in it to receive the bolts from the landside of the forward plow, and the bolts make the plow entirely and substantially fast to the flange when their nuts are tightened; and by means of the slots in the flange, the forward plow is raised or lowered and made perfectly fast and secure at any point wanted for the regulation of its depth of furrow, and any requisite depth may thus be secured to any degree of nicety. The forward mould-board turns the sod-furrow as wide as the working of the whole plow, and the earth on top assuming an arch-like shape, is naturally opened, while the effort of the rear mould-board brings up the deeper soil, completely covering and filling the surface, so that the sod-furrow is in no case liable to be brought to the surface by harrowing or other processes of after-cultivation, the surface of the furrows lies arching, the cohesion of the soil is neutralized, its integral parts are disunited, and the plowed land lies light and mellow, and almost as fine as if harrowed,—indeed, in some free soils rendering the use of the harrow quite unnecessary. Two other sizes of the Double Plow are made by the manufacturers, namely, Nos. 31 and 35, —No. 31 being a size smaller, and No. 35 a size larger that the No. 33 above represented. These sizes afford a range of work from 7 to 15 inches deep."

FERTILIZERS.—The official report of the Minister of Finance of the Republic of Peru states that according to the recent measurement of scientific men the Chincha Islands now contain 16,401,466 tons of guano. Peru possesses also many other guano deposits containing a very considerable quantity, the measurement of which has been ordered by government. Large deposits of guano are also scattered about the Indian Archipelago, and specimens of bats' guano have been sent to England from Penang. But a member of the Chemical Society in London, Mr. Way, believing that all these immense stores of agricultural wealth must be exhausted in a few years, has brought the subject before the Society. There are at Farnham, in Surry, deposits of "soluble or gelatinous silica," some eighty or one hundred feet in thickness, and covering an area of several miles. This silica, Mr. Way says, can be easily made to combine with lime, forming silicate of lime, which is very beneficial on light lands, inasmuch as it prevents the over luxuriance of growing grain, and strengthens the straws.—*Journal.*

UNITED STATES AGRICULTURAL SOCIETY.

The annual meeting of this society commenced its session at Washington on the 22d of February; but owing to the unprecedented storm which had delayed the arrival of delegates, no business was transacted on the first day.

THURSDAY, Feb. 23.

The Society was called to order at half-past ten o'clock—Hon. MARSHALL P. WILDER, President, in the chair—W. S. KING, Recording Secretary. About 100 members were present from 19 States.

The President delivered his annual address, which was referred to the executive committee for publication.

On motion of Col. C. B. CALVERT, of Maryland, business committees of three were appointed, to whom were referred the various subjects brought before the meeting.

A committee of one from each State was also appointed to nominate officers.

Prof. MAPES, of New Jersey, had several subjects to present, if he knew the proper time to do so. He had in his hand a head of wheat, part wheat and part chess, which he wished to offer. It was placed in his hands by a farmer of Livonia, Livingston county, New York. He had also a new style of plow to bring to their notice.

Mr. DEDERICK, of Albany, New York, moved that a committee of three members on the subject of Agricultural Machinery be appointed, and to report to the Society. He spoke at some length in explanation of the great importance to the agricultural interest of being placed in possession of the best implements for the prosecution of their labors. The motion prevailed, and Messrs. Dederick, Musgrave, of Ohio, and Mapes, were appointed.

Mr. DENTON OFFUTT, of Lexington, Kentucky, moved the appointment of a committee on Animal Physiology, and the general improvement in all respects of domestic animals. It was a subject of high importance.

Mr. CALVERT testified to the influence, to him wonderful, whatever it was in itself, of Mr. Offutt's power over at least one animal, the horse. He had been an eye witness to a scene at the Maryland State Fair, which may be mesmerism, or magnetism, or what not; but Mr. Offutt reduced almost instantaneously a horse noted for vicious propensities, to gentleness and tractability. He warmly seconded the motion of Mr. Offutt.

An invitation from Mr. GLOVER to the society to visit his collection of models of fruits at the Patent Office was then read. The invitation was accepted, and a committee consisting of Messrs. Worthington, Berckman, Warder, Munn and Richards, was appointed to report upon the same.

The President then offered for consideration the contents of two communications confidentially committed to him. One was from Mr. JOEL HITCHCOCK, of St. Lawrence county, New York, on the subject of a remedy for the potato rot; the other on the subject of a remedy for the devastations of the *curculio* on fruits, by some person whose name did not transpire. The object of the parties seemed to be to get their remedies to be tested by the society through committees of the same, and reports made at the meeting of next year.

The question on the reference of these propo-

sals gave rise to a very animated debate, in which views of very opposite character in respect to the probable value of the alleged discoveries were elicited. They were finally, after a strenuous opposition, referred to the Executive Committee, to test the modes proposed and to report to the next annual meeting of this society.

The subject of the Curculio was referred to a committee, consisting of the President and Messrs. Brinckle and Berckman.

A committeee was appointed to petition Congress to make some arrangement with the government of Peru, by which Guano might be procured at reduced prices.

A communication from Mr. James Pederson, on the subject of introducing the Alpaca or Peruvian sheep into the United States, was then read by Mr. Munn, of New York.

At the evening session Professor MAPES exhibited and explained an improved sub-soil plow, invented by himself.

FRIDAY, Feb. 24.

In the absence of the President, Hon. JOHN A. KING, of New York, was called to the chair, when Professor FOX, of Michigan, delivered an address on the best means of extending Agricultural Education in the United States, which excited considerable discussion, during which the President of the United States rose, and, addressing the Chair, thanked him for the intelligence that had been furnished him of the session of the society; spoke in terms of compliment and approval of so much of Prof. Fox's address as he had heard; acknowledged the high interest and importance of the object of the society, and of the question before it; and said that while he should be most happy to remain during the interesting proceedings yet to be had, other duties demanded his retirement, and compelled him to bid them good morning.

The question of petitioning Congress to purchase Mount Vernon, for the purpose of making it the site of a national Experimental Farm, was discussed by Messrs. TAYLOR, CALVERT, EARLL, BROWN, KING and others, without coming to any definite conclusion. At the evening session, on motion of Mr. Earll, the memorial of the Maryland State Agricultural Society, petitioning Congress to purchase Mount Vernon for an agricultural school, was taken up and read.

Mr. FRENCH, of Massachusetts, advocated the adoption of the resolution. It was carried, and Messrs. Blair, of Maryland, Earll, Brown, King, of New York, and French, of Massachusetts, were appointed a committee to present it to Congress.

Mr. BROWNE, of Pennsylvania, made a report from the committee appointed to investigate Mr. Denton Offutt's system of animal physiology.

Mr. ROBBINS, of Ohio, presented a memorial from citizens of Ohio asking the countenance and patronage of the society to a cattle exhibition to be held in September next, in Springfield, Clark county, Ohio, which was referred to the Executive Committee.

Hon. M. BENSON presented a resolution, in behalf of Mr. MEACHAM, of Vermont, that a National Exhibition of Sheep be held in the course of the year in the State of Vermont, at such time and place as the Agricultural Society of Vermont shall appoint. Carried.

Mr. FINCH, of New York, proposed that a monument should be erected to the memory of John S. Skinner, the pioneer of American agricultural editors.

Mr BROWNE, of Pennsylvania, supported the proposed tribute.

A resolution, which recommended a stone in the National Washington Monument, with a suitable inscription, was carried.

Mr. BRADFORD, of Delaware, made a report on the guano trade, narrating the interview of the committee on the subject with Mr. Dudley Mann, Assistant Secretary of State. Hopes are entertained that arrangements may be made with Peru by which the price of guano will be reduced.

Mr. CAUSIN, from the committee to examine and audit the accounts of the Treasurer, reported, complimented their accuracy, and stated a balance of $3,005 in favor of the society. Of this upwards of one thousand dollars have been contributed at the present meeting.

Mr. BENSON read a bill now before a committee of Congress creating an Agricultural Bureau.

Mr. CALVERT recommended the creation of an Agricultural Department, on an equal footing with the other agricultural Departments, the Secretary to have a seat in the Cabinet.

PETER A. BROWNE, of Pennsylvania, spoke at length on the various propositions for Congressional aid, and gave his own opinions.

Mr. KING, of New York, moved that the society adhere to the resolutions of last year, asking for a full department.

We do not find it stated whether this, or any other resolution on the subject, was adopted.

Addresses were delivered by Dr. WARDER, on the Culture of the Grape—by B. P. POORE, on the History of Agriculture, and by Dr. Eddy, on Bees and Bee Culture.

OFFICERS FOR THE ENSUING YEAR.

The officers of the United States Agricultural Society for 1854 are:

President—MARSHALL P. WILDER, of Mass.

Vice Presidents—19, (one from each State represented.)

Executive Committee—C. B. Calvert, John A. King, A. L. Elwin, J. D. Weston, B. P. Poore, A. Watts, John Jones, W. S. King.

Cor. and Rec. Secretary—W. S. King, of Boston.

Treasurer—William Selden, of Washington.

For the New England Farmer.

GUANO FACTORY.

Some years ago, I thought I would try my luck in keeping a few hens. The house I keep them in is a rough, cheap concern. I put some crotches into the ground, boarded up outside and inside, then filled in with saw dust to make it warm. It is well lighted with glass windows, and well ventilated, and a small stream of water runs through it. The roosts will accommodate about one hundred hens, that being the number I usually keep. Under the roosts I throw three or four ox-cart loads of dry muck, chip dirt, &c., which I haul over two or three times a week with my manure hook, I bury their grain in it, and make them work for a living, which gives them exercise in cold weather. In the spring, I have a fine heap of home made guano. If there is anything imported that is better to make our crops grow, I am mistaken. C.

Brattleboro', Vt.

HOUSE ASHES.

The value of house ashes as a stimulant of vegetable life, is now happily too well understood to need any illustration. On corn, wheat, garden vegetables and root crops in general, the highly beneficial effects of wood ashes, have probably been witnessed by every one. In compost, they are also of great value; and as a top-dressing for grass land—especially where the land is cold and inclines to the production of moss, or has become "bound out," ashes are of the greatest service. In the cultivation of fruit trees, no application is of greater efficiency, or productive of more immediate or obvious results.

The effect of leached ashes upon the crop may be as good, perhaps, for one or two years as that of the unleached, but it cannot be as permanent, as most of the potash is washed out by the process of leaching. "Wood ashes may be used to advantage to almost every class of crops, but especially as a dressing for grass, grain, millet, and Indian corn; but they are the most perceptible upon leguminous plants, such as clover, peas, beans, &c. As a top-dressing to grass lands, they root out the moss, and promote the growth of white clover. Upon red clover, their effects will be more certain if previously mixed with one-fourth of their weight of plaster."

But there is a remarkable difference in the quantity of potash produced by equal weights of different trees and plants. In Sir HUMPHREY DAVY's Lectures on Agricultual Chemistry, we find a table showing this difference in several kinds of trees and plants, which we give below as a matter of interest to the curious. Potash was once called "salts of wormwood," and the reader will perceive that the name was not inappropriate when he notices that while the oak has only 15 parts in 10,000 of potash, wormwood has 730!

	PARTS OF POTASHES.
10,000 parts of the poplar produced	7
" " beech	12
" " oak	15
" " elm	39
" " vine	55
" " thistle	53
" " fern	62
" " cow thistle	196
" " bean	200
" " wormwood	730

There is no doubt, now, among any agricultural people, of the great value of ashes as a fertilizer. It was held in as high estimation among the Romans, and the ancient Britons, as it is at this day. A German counseller, HERESBACHIUS, in his *Treatise on Husbandry*, published in 1570, tells us that "in Lombardy, they like so well the use of ashes, as they esteem it farre aboue any doung, thinking doung not meete to be used for the unholsomnesse thereof." Their use as a manure is also very general in England at this day.

With this concurrent testimony, therefore, of the value of ashes, we hope to see less of it in the gutters and highways, and more upon the gardens and fields.

For the New England Farmer.

EXPERIMENTAL FARMS.

The suggestion in the last number of the *Farmer*, as to the establishment of experimental farms in the several *Counties* of the Commonwealth, and the appropriation of some portion of the funds of the County Societies to the management of these farms, are worthy of deliberate attention. It is certainly true, that very little benefit accrues from the awarding of premiums, when they are sought merely for the money obtained. Unless the claimant is moved by the desire to improve himself and his neighbors, by his experiments, but little benefit will be derived from them. If he is moved by such a desire, how can it be carried out better, than on farms established for the purpose, where all the operations will be carefully observed and reported.

If I do not mistake, something of this kind is contemplated by the Legislature, in placing the farm at Westboro' under the care of the Board of Agriculture. By so doing, two objects will be gained at the same time. 1. The Board will have an opportunity to display their skill in farming. 2. The boys will be instructed in useful labor. Allow me to congratulate the community, that this *first step* in the way of improvement has been taken. If judiciously pursued, it cannot fail to be beneficial. If farming is what it is cracked up to be, it cannot fail to sustain itself under such management.

How would it answer, for the Legislature to require of County Societies, to invest a part of their funds in *experimental farms* instead of *paying stock*, as now required! Certainly such a requisition might be made of all societies to be incorporated; for which several applications are now pending.

I am heartily glad to see the remarks of the gentleman from Plymouth. He never speaks without having something to say. P.

Feb. 27, 1854.

SOAKED CORN FOR HORSES.

One of the most successful and judicious farmers in the vicinity of Baltimore, effects a saving of from one-third to one-half of his corn, by soaking it thoroughly before feeding. His method is this:—two empty vessels, hogsheads, or something similar, are placed in his cellar where there is no danger from frost, and filled to the chime with ears of corn. He then pours in water, till the receptacles are filled. When well soaked, the corn is fed to the horses, and when the contents of one cask is consumed, it is again filled, and the animals fed from the other. Even cobs, soaked in a similar manner, but in pickle instead of pure water, are eagerly devoured by cows, especially if the usual allowance of salt is withheld. The corn cob contains a large quantity of nutriment, and is by far too valuable to be thrown away. R. F.

Chester, Kent Co., Md., Jan. 2, 1854.

REMARKS.—This has become a general practice among judicious farmers, who feed their horses upon corn. Our estimable friend, David Landreth, Esq., who keeps a number of fine horses upon his great seed farm, near the town of Bristol on the Delaware, always feeds them upon soaked corn, and has done so for several years, He considers it a decided advantage.—*Germantown Telegraph.*

EIGHTH AGRICULTURAL MEETING,

At the State House, Tuesday Evening, March 7, 1854.

Subject,—*The Culture and Preservation of Fruit.*

The meeting was called to order at 7½ o'clock by Mr. Simon Brown, and Hon. Mr. Brooks, of Princeton, was invited to take the chair for the evening.

Previous to entering on the discussion of the topic for the evening, Mr. Holmes, of Nova Scotia, delivered a short but interesting lecture on the subject of *Vegetable Physiology*.

The lecturer, after alluding to the many beautiful and gorgeous scenes which are presented in the vegetable world—in the grass of the fields, the flowers, the shrubs, and the wonder which they excite, remarked that if we turned our attention to their construction and growth, we should find them equally wonderful and interesting. A plant consists of three essential parts—the roots, the stem and the leaves. The roots extend themselves into the earth, the stems stretch upward and spread into branches, and the leaves shoot from the latter. The stem is a bundle of small tubes cemented together in a vertical position, and consists of four parts—the pith, the wood, the bark, and the medullary rays, the latter being those rays which we find radiating from the centre of the tree to the bark. The wood consists of two parts,—the true wood, and alburnum, or new wood. The root when it leaves the stem, differs but very little in character from the stem itself, but as it penetrates the ground, first the wood, and then the pith, gradually leave it, and finally nothing but a pithy, soft wood, covered with bark, remains. The green matter in the leaves corresponds with the inner bark of the tree, from which the leaves derive their color. The function of the roots of a plant is to absorb and convey to the stem those juices which nourish and sustain it, as water, carbonic acid, &c. Gases, when in a state of solution, also enter by the roots—as ammonia, and oxygen,—and lime, magnesia, and other mineral substances, are absorbed in this manner. It is also a function of the roots to select the particular kinds of food which a plant needs, and reject all others,—a fact which has been demonstrated. They also promote the excretion of certain substances which have performed their part. The pith of a tree does not seem to perform any very important function, as it may be removed without causing, apparently, any great injury. The leaves of a plant are its lungs. If the roots of a plant in leaf are put into a basin of water, the water will disappear, having been evaporated by the leaves. Their most important function is to inhale carbonic acid, that great essential for the growth of a plant, and exhale oxygen; but this process is by night inverted, the plant absorbing oxygen and throwing off carbon. The amount of carbon inhaled during the day, however, far exceeds that emitted by night. Different substances may be composed of precisely similar elements, combined in exactly the same proportions; some of these substances may be transformed one into another. By the application of heat, the woody fibre may be changed into gum, the gum into starch and the starch into sugar. The character of a plant cannot be determined by its chemical elements. In growing plants the temperature of the climate should be consulted. Plants indigenous in warm latitudes will yet germinate and thrive in much colder ones, showing that the seed possesses a heat of its own. The light is prejudicial to germination. The pistils of flowers, which are the germs of the fruit, are at first tasteless, but after a while as they grow, absorb oxygen, and become sour, remaining so until the fruit attains its full size, and begins to ripen, when the sourness subsides and the fruit becomes sweet by the accumulation of sugar. Apples will ripen after being taken from the tree, if supplied with oxygen.

The lecturer concluded by remarking that scientific agricultural chemistry was the key by which it was hoped at some future time the diseases of plants might be discovered. As it is, the science has already rendered great services to the farmer.

At the conclusion of the lecture, the Chairman invited remarks upon the subject of *fruits*, and called on

Mr. Field, of the Senate, who remarked that he had cultivated some kinds of fruit to some extent, and with unusual success. This success he attributed to his manner of culture, which is in the fall to dig in around the tree all the leaves which have fallen from it, and then spread six to ten fork-fulls of manure about it.

Mr. Russell, of the house, said he felt interested in the subject, but he should prefer hearing the opinions of gentlemen of more experience, than to occupy the time with remarks of his own.

Mr. Simon Brown, of the *N. E. Farmer*, followed and remarked that he had nothing special to say in regard to the subject, but felt great interest in it. He sincerely believed in the advantages of cultivating fruit, and to a very considerable extent he considered it a profitable crop when properly cultivated, with a soil and climate congenial to its growth. He would speak of but one kind of fruit—apples. He believed that this crop might be increased four fold from what it now is, and still be found a profitable one. Instead of attempting to raise potatoes to feed swine and cattle, we may resort to the apple crop with profit. It is an easy crop to raise, when its management is understood, is easily harvested, and affords sufficient nutriment to make it worthy the attention of the farmer to cultivate it as a common feed for

stock. Of this latter fact he had been assured by a great many persons who had tried the experiment. Suppose a man has a ten acre lot, with ten apple trees thereon, he will get more grass in ten years by having those trees on his lot, than he would get without them. They have a great effect in retaining the moisture in the land, which is an important advantage in our dry hot summers. And then suppose from those ten trees, ten bushels of marketable apples are gathered, amounting to one hundred bushels of apples, which are obtained besides the grass crop. He had no doubt such a result might occur for seven years out of ten. The cultivation of apples is as simple, almost, as that of a hill of corn, if begun rightly. He would have his nursery trees shaped *in the nursery*. They should not stand thickly, causing them to run up slenderly, but where the light and air can come to them; and for the first two or three years allowing the lateral shoots which come out in spring, to remain through the summer and autumn. The leaves are the lungs of plants, and if these little side shoots are cut off, the growth of the tree is retarded, and sometimes entirely suspended. He would cut them off late in the fall, and if quite small, leave them through another summer. The ground should be plowed deeply, and pulverized well, and made as rich as a cornfield would be which was intended to be laid down to grass, and from which two tons of hay per acre is expected. Dig around the tree, spread manure, add annually a little ashes, and they will grow on almost any soil. If properly taken care of when young, the full grown tree will rarely need trimming. The top of the tree should be kept open, to admit the light and air to ripen the fruit, for there is nothing that grows but needs a liberal supply of the sun. Mr. BROWN said he would not wash trees unless they had the appearance of needing it, were mossy, or stunted by neglect, and then a thorough scrubbing with soap suds would give them a new start. Old orchards he should not cut down, so long as there was two or three inches of sound wood left; but the trees should be trimmed properly, and a crop of apples can be obtained from them quicker than from young trees. Pruning should not be done in spring, after the sap is in motion, because it will continue to flow from the wound, and soon becomes bitter and poisonous; it is so acrid and pungent as to mark its passage down the bark of the tree by a black stripe, which frequently kills the bark, and thus commences the destruction of the tree. He would trim, he said, in the autumn, after the leaves have fallen, say in October and November, or omit it until June.

Mr. COPELAND, of Roxbury, remarked that when a man plants a tree he should look at it as it would look twenty years after, and trim it while young, as he would like to have it appear at the end of that period, a thing which is perfectly easy to accomplish. As a general thing, trees have roots of about the same size and number as the branches; and if large branches are cut off close, the corresponding roots die and become a canker to the tree. If cut so as to leave a small branch on the stump, the sap will flow into that, and the tree will remain healthy. Great care should be exercised in obtaining trees from nurseries, as there is much deception practiced in regard to them. Instead of buying a cheap article, the farmer should send to some nurseryman who has established a reputation for honesty, and by paying a fair price, he will obtain trees which he can rely upon. The speaker instanced a case of successful cultivation of dwarf pears, which was brought about by thinning out the blossoms and fruit on the trees, limiting some of them to ten or a dozen pears each, thereby vastly increasing the flavor, size and beauty of the fruit. This fruit, raised in New Jersey was sold in the Philadelphia market in the height of the season, for $1,00 to $2,00 per dozen, when the same varieties, raised in the ordinary way, did not command over $1,00 per bushel. He thought farmers were too much afraid of this mode of culture, and did not understand its advantages.

Mr. FRENCH, of Braintree, alluded to the necessity of starting right, by selecting a congenial soil and preparing it rightly. It should be plowed deeply, and if trenched with the spade it would be an improvement. All those who carried off the premium for fruit last year raised it on light, loamy soil. Pears on quince stock will bear planting a little deeper than those in their own stock. If a tree, with the roots spread, is planted, too low, it will become stunted and cease to grow; but if planted on the top of the ground, as the speaker had five acres, and then cover the roots with manure, they would flourish exceedingly. Out of 400 planted in this way he lost but *two*. He thought old trees should not be grafted all over at the same time. If the tree is large, say 10 or 12 inches in diameter, grafting the whole head at once, will generally prove the death of the tree. If done gradually the process is more likely to succeed. Trees should be set out two rods to forty feet apart; and on being set out the care of the tree is just begun, instead of being finished. It would be better to turn cattle into a cornfield than into an orchard, because in the former the damage may be remedied the next year, while in the latter, it never can be. Animals, by rubbing against a tree, rub off a kind of grease, which is very deleterious to the tree. Some old farmers complain that they cannot get any fruit from their orchards; and no wonder, for on examination it will be seen that it is as much as the trees can do to live. The leaves look yellow, and the ends of the limbs are dead, a certain sign that the nourishment of the

tree is exhausted. By breaking up the ground and cultivating it, in two years, such an orchard may be made to yield good fruit. Mr. FRENCH dwelt on the need of a State fruit farm, where all the different varieties of fruit, as they come before the community, may be tried and their value ascertained. This would be of great benefit to the farmer, as by applying to the superintendent he could ascertain at once the best varieties. A subscription of one dollar from each farmer in the State would yield one hundred thousand dollars, and this sum would establish such a farm, on which farmers' sons might be educated especially for agriculture.

Mr. CURTIS exhibited to the meeting some admirably preserved pears, which were the result of a secret process for retarding the ripening of the fruit.

Mr. BROWN announced that the Executive Committee had written to Dr. LEE, of Rochester, N. Y., in regard to lecturing, and he was expected to lecture on next Tuesday evening; but if he should fail, a lecture would be delivered by Mr. HOWARD, of the *Boston Cultivator*, on the subject for that evening, viz.

Neat Cattle,—What is the best method for improving stock to be kept on the farm?

For the New England Farmer.

AGRICULTURE IN MASSACHUSETTS.

Senate document No. 7, just come to hand, gives encouraging assurance, that agriculture is soon to occupy its appropriate place in the councils of the Commonwealth. No one can arise from the perusal of this paper, without being forcibly impressed with the vastness of the field of labor it opens. This bird's eye glance, at the comparative conditions of farming *now*, with what it was *one hundred years ago*, affords some criterions to hope what it may be, *one hundred years hence*—even at the same rate of progress. But when the go ahead propensities of the age, are taken into view—it may not be easy to estimate, the proportions it may attain.

We are pleased with the discriminating intelligence, modified by a commendable diffidence, apparent on every page of this Report. Much better to be so, than in a dictatorial, authoritative style. It is always better not to make assertions, than to retract assertions. Few things in agriculture are so certainly known, as to be averred with entire confidence.

In the notice of the culture of the cranberry, more new ideas are presented, than on any other topic. This is indeed, to most, a new species of culture; governed by rules somewhat extraordinary, deriving support chiefly from *air* and *water*, and not from the *soil*. Considering the excellence of this fruit, and the increasing demand for it, it will not be surprising, if the diffusion of this information, should greatly extend its culture. We have ourselves, in the North-easterly extremity of the State, more than once, witnessed the successful upland culture of the cranberry—generally accompanied with a liberal dressing of mud from the meadows, operating not as a fertilizer, but as a sponge to retain moisture.

We looked with interest, to see what might be said of the "native stock of New England;" but we do not find the author prepared to add to our assurance on this topic. He thinks the Devons, as a class, were not known in England, at the time of the first importation of cattle here. This may be, but it by no means follows from this, that they did not have the same origin as the Devons of England. They certainly have a most striking family resemblance; and in our judgment, afford the best basis for permanent improvements.

We commend the perusal of these pages to all who are willing to be instructed in matters agricultural; feeling confident, that the *first Report* of the Secretary will be found entitled to a favorable reception.

r.

March 4th, 1854.

NEW USE OF PLASTER OF PARIS.

Although proposing a new remedy for that most distressing and discouraging disease, spasmodic asthma, may not be an agricultural topic, yet if the use of it should relieve only two out of twenty farmers who we know are troubled with this disorder, it cannot be said that it has done farmers no good. We will here promise that we have not tried this remedy, and know nothing practically in regard to its remedial powers.

We send the story of its use around, with a view to have it tried by the suffering who have as yet obtained nothing to relieve them. We find it communicated to the *Boston Medical Journal*, by J. P. Root, M. D., of New Hartford Centre, Ct. He gives two cases, as follows:

"Some three years since I was called to see a severe case of spasmodic asthma, in the person of a young lady of eighteen years. After going through with the articles commonly used in such cases, but with little effect, I accidentally hit upon the use of 'plaster of Paris,' in mixture, with almost magic-like result.

The only thing previous to this that gave her much relief was the smoking of stramonium leaves. Since using the plaster, however, she has been constantly improving. In fact, for the last two years or more, she has nearly forgotten what formerly alarmed not only herself and friends, but troubled her physicians. I have used this article ever since with similar results.

About two months since I was called to witness the agony of a little girl of twelve years, lately moved into this vicinity—more to console her friends than to relieve the sufferer, as they had given up the idea of ever seeing her cured, or even made better; for, to use their expression, they had 'been to all the doctors, and they didn't do her any good.' She had not been in a recumbent position for a week. I immediately commenced the use of my favorite remedy, with results as before.

The mixture should be prepared similar to lime water, and used freely, diluted in water or milk, on each recurrence of the spasm."

Dr. Root goes on to say that he is in the habit of prescribing, for his asthmatic patients, cold sponging about the neck and chest every morning, followed by brisk friction.

The readers of the *Farmer* will see that a trial of this remedy will not involve much expense

Throw a handful of plaster into water. It will take about seven hundred parts of water to dissolve one part of the plaster.

Having attended to the human patient, let us consider it agriculturally, and inquire if it would not be useful for horses that have the heaves. We consider the two diseases analogous, if not identical in character. We also consider them to originate in a peculiar condition of the stomach. Some years ago we noticed that "heavey horses," as they are called, were enormous eaters, and we have been assured by some men who have occasional attacks of asthma, that previous to the recurrence of the attack their appetite increases, and they eat much more than at other times. We have also known heavey horses much relieved by drinking water from a tube in which lime had been thrown.

Try the plaster of Paris water for them.

Query.—Did you ever know an animal that chewed the cud have the heaves? We never did, and hence we think that our position is correct, viz: that these diseases originate in the stomach. The lungs of the ox and those of the horse vary but little in structure. Their stomachs vary very much indeed. The ox chews his food over a second time, and it is very perfectly digested. The horse chews his food but once, and it is not so perfectly digested as that of the ox. The horse has the heaves—the ox does not. We throw these hints out for phthisicky folks to think of at their leisure.—*Maine Farmer.*

ANCIENT SPINNING WHEEL.

E. H. Pease, Esq., of this city, deposited in the Agricultural Rooms, a Spinning Wheel, in good preservation, received from Mrs. Elinor Fry, of East Greenwich, who gives the following interesting account of it:

"I will, with pleasure, give thee the history of the curious spinning wheel, as far as I know. In 1754, the wheel came to my father's house, in East Greenwich, from Narraganset. Whether it originated in England or Ireland, I cannot say, but it had been in America near one hundred years when it was brought here. In 1771, I, Elinor Fry, spun on the said wheel one piece of lawn handkerchiefs, 12 in number, as good as those imported from England; the ladies here were emulous to excel, and were so patriotic, they chose the fabric of our country, and toiled with their own hands to spin lawn for their dresses, proclaiming independence of Great Britain, for some of us were so happy as to have farms of our own to clothe us; and our fathers encouraged us to wear such as we made. The identical wheel spoken of, Samuel Fry, my father, gave to me, and I, Elinor Fry, presented it to Erastus H. Pease, to hold or sell, as he pleases.

In regard to the spinning party, it was done in 1789, to celebrate the Federal Constitution and to encourage manufacturing in the State of Rhode Island. 21st of April, 1789, 48 patriotic ladies assembled at the court house in East Greenwich, with their own wheels, their own flax, and for their own use spun 178 skeins of linen yarn in one day, from sun-rise to setting at night; one lady spun seven skeins and one knot, it being the most spun by any one of the company; there were several that spun six skeins in the same time; the usual custom was two skeins in one day for each to spin. There was a festival in Providence, in 1790, where there was a splendid ox roasted, called the Federal Ox. I was there at the time, and saw the ox while roasting. This may not be interesting to thee, so I will omit saying more on this subject. I herein sign my name, this eighth day of the 4th month, 1853. ELINOR FRY."

Journal of the N. Y. State Ag. Society.

OUR COUNTRY'S AREA.

From a table prepared by Col. Abert, of the Topographical Engineers, we find the total territorial extent of the United States as follows:

	Square Miles.
Area of the Pacific Slope, or of the region watered by rivers falling into the Pacific	778,266
Area of the Mississippi Valley, or the region watered by the Mississippi, Missouri and their tributaries	1,237,311
Area of the Atlantic Slope, proper	637,190
Area of the Atlantic Slope, including only the waters falling into the gulf of Mexico west of the Mississippi	186,646
Area of the Atlantic Slope, including only the waters falling into the Gulf of Mexico east of the Mississippi	146,860
Total of the Atlantic Slope, or the region whose waters fall into the Atlantic	967,576
Total area of the United States and their territories	2,981,143

No one can look over these figures without being impressed with the exalted destiny that awaits our country. Already our empire equals in extent the Roman in its palmiest days, and all this immense territory and seacoast is guarded by a standing army of only 12,000 men and 76 ships of war.

The next census and measurement of the Republic may include Cuba, the Sandwich Islands, Sonora, Lower California, and perhaps the Canadas, giving a population of nearly Thirty-Nine Millions, and a territory of Seven Millions of square miles. The period between 1840 and 1850 added Texas, New Mexico and California to the Union, comprising a million square miles. The next ten will not fall behind its predecessor in the accomplishment of "Manifest Destiny."

For the New England Farmer.

FEED OF STOCK.

MR. BROWN:—The criticisms in your last paper, upon the comparative value of articles as food for stock, are well calculated to restrain crude and inconsiderate statements. I am not surprised at all, that Mr. H. should apprehend that the "printer's devil" had been poking fun at him, when a pound of carrots is estimated as only equal to ¼ of a pound of hay, or 1-12 of a pound of meal. Conclusions like these must result from a partial and imperfect view of the subject. Next to actual experiments in feeding,—the price of these articles in the market, may be taken as evidence of their value. If, year after year, shrewd, practical men are found growing carrots, and feeding them to their animals the presumption is very strong, that they have value in them. I would as soon rely upon such results, as any chemical analysis. That the general condition of animals is improved by feeding on carrots, and that they are a palatable feed, there can be no doubt. How far they increase the *quantity of milk*, is a question on which different opinions are entertained. When the *model farm* for Middlesex shall be es-

tablished on the plains of Concord, where the first germs of freedom were moistened with blood, under the supervision of the intelligent observers there situated, it is to be hoped more light will dawn on this and other subjects.

Feb. 28, 1854.

For the New England Farmer.

COUNTRY FARMERS AND CITY MECHANICS.

Mr. Editor:—I am one of that great multitude of farmers' boys, who, early imbibing the notion that farming is less profitable than most other kinds of business, learn a trade, and finally find themselves city mechanics. A grand good position to look back from, and which I have long wished some one of our class, more competent than myself, would improve for the benefit of our successors; for it seems that farmers' boys, and girls too, are still looking to the shops and stores of the city, as a refuge from the poverty of the farm.

On looking back from this stand-point upon my past experience and observation, the first conviction which occurs to my mind is, that farming is *more*, and other business is *less* profitable than they *seem* to be. I have lately received a letter from a brother, who not "taking to a trade" now owns a small farm. Alluding to my old notions of the unprofitableness of farming, and to the high prices I now pay in the city for all kinds of provisions, he says, in the familiar style of family correspondence:

"On looking at the amount and variety of articles consumed and worn out by farmers; the interest most of us pay when we first begin in the world; our carriages and harnesses; our clothing, food, &c., for ourselves and little ones, I think there must be profit somewhere in farming, greater than you used to allow. Look into our buttery, our clothes-press, our cellar, our barn, and pigpen,—nothing to brag of, as you know,—but yet enough if all were put into a bill to make quite a sum. If farmers were to give their farms credit for rent and everything you pay money for, which their farms produce, they would need something of an income to foot the yearly bill—and would find out, I believe, that farming is not quite such poor and unprofitable business as some of us think it to be."

Farmers handle but little money, and hence are apt to look upon the weekly wages of mechanics as large, which will barely supply a family with the necessaries of life. I recollect my feelings, when a boy, on hearing of a mechanic who received ten dollars a week in the city. I could hardly imagine what one man could do with so much money; or, when it was possible for others to put themselves in the way of getting such wages, anybody should be willing to stay and "gee-haw" oxen on a farm at fifty cents a day! Well, I left the farm, and have reached the goal of my boyish ambition. I am in Boston, with ten dollars a week!

But how much better off am I, after all, than most of my schoolmates are, who were compelled to work for twelve to fifteen dollars per month, while I was receiving thirty to forty! Little if any; and why? Because "circumstances alter cases." Before I kept house I had twelve to fifteen dollars per month to pay for board, washing, mending, and other unavoidable incidentals—a very important item that farmer-boys seem never to take into account,—and then, when sick, my watcher's, nurse's, doctor's, apothecary's, boarding-house keeper's, and washerwoman's bills were all made out on the ten-dollar-a-week system, and took off the dollars almost as fast as my pulse beat in a high fever. While the farmer-boy who works by the month is boarded, washed and mended, "in the bargain," and, if sick, is taken care of at the lowest figure, or carried home to be nursed by his mother and sisters.

If the editor thinks the foregoing remarks worth publishing, I may take time to say something upon the relative advantages and trials of supporting a family upon a farm in the country, and on ten dollars a week in the city.

A City Mechanic.

Boston, March 6, 1854.

TENACITY OF LIFE.

Among the lower animals tenacity of life is the most remarkable in the polypi; they may be pounded in a mortar, split up, turned inside out like a glove, and divided into parts, without injury to life; fire alone is fatal to them. It is now about a hundred years since Trembly made us acquainted with these animals, and first discovered their indestructibility. It has subsequently been taken up by other natural historians, who have followed up these experiments, and have even gone so far as to produce monsters by grafting. If they be turned inside out, they attempt to replace themselves, and if unsuccessfully, the outer surface assumes the properties and power of the inner, and the reverse. If the effort be partially successful only, the part turned back disappears in twenty-four hours, and that part of the body embraces it in such a manner that the arms which projected behind are now fixed in the centre of the body; the original opening also disappears, and in the room of feelers a new mouth is formed, to which new feelers attach themselves, and this new mouth feeds immediately. The healed extremity elongates itself into a tail, of which the animal has now two. If two polypi be passed into one another like tubes, and pierced through with a bristle, the inner one works its way through the other and comes forth again in a few days; in some instances, however, they grow together, and then a double row of feelers surround the mouth. If they be mutilated, the divided parts grow together again, and even pieces of two separate individuals will unite into one.

New Material for Paper.—We have just examined, says the *Baltimore Sun*, several samples of paper made of reeds or cane, of a species which grows in great abundance in our southern States; and also a sample made by the same process from white pine shavings. In such an age of invention as this, incredulity is not to be tolerated; therefore we submit with the best possible grace even to the white pine. The reed paper is quite a promising article. Another sample composed of rags and reeds, one-third of the former and two-thirds of the latter, is quite a fine article, and its value is estimated by the makers equal to that of rags worth 12½ cents per pound. The paper from pine shavings is designed for wrapping or envelope pa-

per. It was first bleached and then colored for that purpose, and is valued at 12½ cents also. The inventors of it, B. A. Darender and Henry Lowe, of Baltimore, are sanguine that with proper apparatus a paper can be manufactured of reeds or wood, as the main staple, by their process, worth 12½ to 16 cents, and at a cost not exceeding 6½ cents per pound.

For the New England Farmer.

CHEAP EXPERIMENT IN DECOMPOSING BONES.

The value of bones as a manure, ground or pulverized, and more especially dissolved and formed into super-phosphate of lime, is now just beginning to be appreciated by practical agriculturists in this country, as its beneficial effects, upon root-crops particularly, have come to be known by experience.

Formerly bones were only regarded among us, as a nuisance, to be thrown in the street, or to be dumped into some hole with the skeletons of old tin pans and kettles, broken pots, &c.;—and the carcases of defunct cows and horses were carted away into some lonely swamp, or distant place in the wood; and not till they had been made an export, for several years, from this country, by our English brethren, did it occur to the American cultivator that "old bones" could be of any possible use.

But when our good farmers began to feel that the saving of manure was a thing of such vast importance, and that the barn-cellar—as my old grandfather used to say to his gardener—was their "jewel box," then they began to look around them for material; and leaves, sods, ashes, pond-mud, peat-earth, oyster-shells, bones, &c., came in use to encourage and aid a more enlightened economical farming.

Yet still, a great obstacle in the way of the more general use of bones, is the expense and difficulty attending their pulverization or decomposition. However prudent a farmer may be in collecting and saving bones, skeletons and carcases, if there is no "bone mill" anywhere within a dozen or twenty miles of him, he is no better off for manures than before; as it is well known, that half a century may pass over them in an unpulverized state without very much of their nutritious qualities being extracted, even during such a lapse of years. Again, the expense and laborious care of decomposing them with sulphuric acid or vitriol,—especially to the majority of farmers, who are not accustomed to such delicate jobs as handling sulphuric acid, and making nice experiments with chemicals,—discourage the mass of them from attempting to go into the manufacture of "home made super-phosphate of lime."

Hence it becomes an important inquiry, especially as this manure is found to be so exceedingly valuable, whether some cheap and easy way of decomposing bones cannot be discovered, for the benefit of the common farm.

Without alluding to other experiments, in regard to dissolving bones in strong lye, &c.,—that have been partially successful, I propose, here, in as few words as possible, to describe an experiment, made on a small scale, with *bones and horse manure*, that may lead many readers to still further experiments, and at length end in some important practical result.

An intelligent and thoughtful neighbor of mine, Mr. EDWARD WILLIS, a soap manufacturer—whose father has taken a great deal of interest for many years in agriculture, especially in the application of ashes to light worn-out lands, and from whom our great neighbor, the late DANIEL WEBSTER, used to procure hundreds of bushels of ashes a year for similar lands—recently made an experiment of this kind. Taking a quantity of bones, none of them perhaps larger, and most of them smaller, than a man's two fists, he made a good layer of *fresh* horse dung, on which he placed a layer of bones, then another layer of manure, then a layer of bones, and so on, to the top, covering the heap over well with the dung. It lay somewhat longer than he intended, and was allowed to become to some degree fire-fanged, but the *bones were utterly decomposed*, disintegrated and dissolved. So that the whole heap had become a homogeneous mass, and you *could not even detect any bones* in it. Now, why would not this manure be fully equal to ground bones,—be nearly or about as good as any of the super-phosphates,—even the "Improved Super-phosphate" of our delightful and scientific friend, Prof. MAPES, which I have found so very valuable, especially in its application to my root crops, pear trees, &c. Mr. WILLIS thought in a further experiment, that he should either manage to moisten the heap, or else not allow the mixture to remain so many weeks undisturbed; and I suggested to him the advantage of covering over the whole mixture at the very commencement of such experiment with charcoal, peat earth, plaster or some absorbent of ammonia, and then after the decomposition of the bones had been effected, to mix it in with the rest of the heap.

I have thus written out an account of this experiment, so very successful as far as dissolving the bones is concerned, as a matter of suggestion to others, and with the hope that it would induce some of our practical farmers, at a time of leisure, to try the same experiment, and after they have made application of the manure thus manufactured, to give to their brethren through the medium of the *New England Farmer*, an account of its fertilizing effects as compared with other composts.

JAMES RICHARDSON, Jr.

Kingston, Feb. 11, 1854.

REMARKS.—Capital. This will be the means of cleaning up many a door-yard, as well as doubling the turnip crops.

For the New England Farmer.

PROFITS OF SHEEP.

MR. EDITOR:—Having a short time since seen in your paper a notice of the great income of the Vermont sheep, I have thought it might not be amiss to say something of the income of sheep in Maine. The income of my 18 sheep, that I wintered last winter, has been $90,80, the present year. In April, I sold one sheep that did not have a lamb, for $4. For the wool sheared from the other 17, I received $31,80, having 40 cents per pound. For 24 lambs, I received $55. My sheep number the same as last winter, keeping one of my lambs to supply the place of the sheep I sold.

JANE A. MORRISON.

Parsonsville, Me., Feb., 1854.

For the New England Farmer.

COOKED AND UNCOOKED MEAL.

Mr. Brown:—I received a letter from you some time since asking for information in regard to my experiments in feeding swine on cooked and uncooked meal. I have recently tried no experiment, but did in 1842 feed five swine on cooked and uncooked food for about 100 days for which I received a premium, and the result was published in the transactions of the Essex Agricultural Society for that year, which I presume you have in your possession. The result was rather in favor of the uncooked meal, and different from what I expected it would be, as I had previously been accustomed to scald the meal, thinking that it was better. I am aware that the result of different experiments is not always the same, still I was pretty well satisfied with the experiment, as I fed them nearly all the time myself, personally, and was sure that there was no mistake or misrepresentation. I have also had some experience in feeding swine on different kinds of roots, such as potatoes, beets and turnips, also on apples. Potatoes are unquestionably the best of any roots, being very palatable when cooked, and were formerly a profitable crop to raise for that purpose. But they are now so degenerated and subject to disease that the scanty crop is more profitable for the market than for swine.

Turnips and beets when cooked and mixed with meal will do tolerably well for store shoats, and some swine may fatten tolerably well on them, but for most swine they are not palatable. And I think for the most part that the corn crop is quite as profitable for swine as the root crop, as there is considerable saving in labor and expense of cooking. I have also used apples, and think well of them in the fall of the year for store shoats, as well as for cattle. In regard to the expense of raising pork, there seems to be different opinions. I was informed by Mr. Phinney some years since, that when corn was worth 75 cents per bushel, pork could be raised for six and a quarter cents per pound. I however, kept an account of the expense of raising pork for one year, while I made about 5000 pounds, and came to the conclusion that it cost at least 7½ cents per pound when corn was worth 75 cents per bushel, and offset the manure for the labor.

Should you like further information in regard to my former experiment, I will forward it to you. Respectfully yours,

Joseph Howe.

Remarks.—Whatever Mr. Howe may be pleased to communicate on this subject, will be received with pleasure.

Shade and Fruit Trees.—As the spring of the year approaches, would it not be well to call the attention of towns, in their corporate capacities, to setting trees in the highways? Some of the advantages would be that the roads are not so liable to fill with drifted snow; they would afford shade and fruit for travellers, protect orchards from depredations, and would perhaps yield income enough to pay the expense of the labor and the towns' poor, and have a surplus left.—*Boston Courier.*

NINTH AGRICULTURAL MEETING,

At the State House, Tuesday Evening, March 14.

The meeting was called to order by Mr. Simon Brown, who announced Col. Newell, President of the Essex County Agricultural Society, as Chairman for the evening.

Mr. Newell, on assuming the chair, at once introduced Dr. Lee, of Rochester, N. Y., as lecturer for the evening.

Dr. Lee remarked that he knew of no better response to the invitation to address the Society on the subject of Agriculture than to offer a few suggestions intended to promote the increase and diffusion of agricultural knowledge. The intelligent gentlemen before him hardly needed to be reminded of the old truism, that "knowledge is power." There are, however, some well-informed men who fail to discriminate between an *increase* of knowledge and the mere *extension* of it to a greater number of persons. It is necessary, to extend any subject, that we be sure of our facts, and that the reasoning from those facts is logical. In the last century, when it was discovered in France, that the sulphate of lime was a valuable fertilizer, a great addition was made to the agricultural knowledge then existing in the world. That was a substantial increase of the professional knowledge of the farmers of that day; but that increase would have been comparatively valueless had there not been called into requisition, means to extend the information to all the farmers of that kingdom and the reading farmers of other nations.

In the first place, we should increase the knowledge we now possess as practical farmers. 2d. We should extend that knowledge, so that the wisdom of each individual may be communicated to all who are pursuing agriculture as a profession.

The value of the *press* to extend useful knowledge is well known. The farmers of the United States support more agricultural journals than all the world beside. This fact enables us to communicate at once to all who are interested in agriculture, every new fact in tillage which may be discovered. Very little could be accomplished in the way of eradicating the prejudices which retard all progress in reducing to practice improvements in agriculture, or in separating useful facts from pernicious fictions, without the facilities which the press affords.

Not only has science to subdue a thousand unhappy prejudices, but it must devise ways and provide means to give our rural population something better than their muscles with which to till the earth,—knowledge. The great question for educated men to decide is, how they can best enlarge the boundaries of knowledge, so as to add to the wealth and happiness of the millions. Massachusetts ought to contribute a few dollars every

year for the purpose of investigating the resources and properties of her soil, and the varieties and value of its vegetable and agricultural productions. For fifty years it has been known that lime is a most important element of fertility; and during all that time it has been important to ascertain the least quantity of this mineral that will suffice in common soils for all useful purposes. In the county in New York where the speaker lived, the soil contained more lime than the soil of New England; and according to the census of 1850, that county produced 500,000 bushels of wheat, more than was raised in all New England. Does not this fact exemplify the importance of knowing the difference between one soil and another? What is there to prevent the farmers of Massachusetts from comparing tons of their soil with that of the West? Do they not need an increase of their present knowledge on this subject? They may exhibit year after year fat cattle, fine stock and handsome fruit, but agricultural fairs are the least useful of all agencies for the advancement of agricultural science. It requires more profound research than such exhibitions ever witness. A public institution is needed, which shall teach to one class of students all that is known in the rural arts and sciences; and to another, how to interrogate nature, and advance science and art from things *known* to things *unknown*. One department should be well adapted to the labor of imparting knowledge to all interested in the subject. The other department should be confined to experiments and analyses for developing new facts in the mineral, vegetable and animal kingdoms. With each of these kingdoms, the farmer has much to do; hence, he should be acquainted with the laws of each; but he can never learn them except by means of associated scientific observations. Few farmers make any useful additions to the science of agriculture; and it would seem necessary, therefore, to employ men whose talents, genius and education peculiarly fit them for such service. Agricultural economy now presents a most inviting field for making important discoveries, and achieving a lasting reputation.

As an illustration of what might be determined by scientific investigation, the lecturer remarked that 100 pounds of wheat or corn consumed a given weight of soil; and he had great confidence in the force of science to determine how much of mould and how much of minerals had been consumed in the growth of plants.

The point to be solved is this; how much of the substance of the soil is absorbed to make 100 pounds of ripe wheat or corn, or other crop? How much of the nourishment of the plant is drawn from the atmosphere, and what and how much from the earth? By proper experimenting, there is no difficulty in ascertaining how plants grow.

If it be admitted that this matter ought to be studied, as a part of our profession, the question may be asked, how and where should it be studied, and by whom? When it is admitted that any branch of knowledge is worthy of study, then it is also admitted that a school is needed to facilitate such study. An agricultural school is not an end, but a means to attain an end. It is not enough to purchase a farm for experimental purposes. It should be supplied with scientific apparatus, and students, and the public should have a clear understanding of the whole economy and labors of the school, so that no one may be disappointed in the results. The Professors should be thoroughly qualified to discharge their duties. The want of men qualified for such positions, the speaker remarked, has long been felt. There is a plenty of material in the country that may be used to increase agricultural science, but it is a little too *raw* for immediate use. Before he had had an opportunity of seeing Congress, he had hoped that it would establish an institution designed to furnish a thorough agricultural education to young men, who should become the educators of the whole country—that a national normal school of agriculture might be established to furnish teachers for all the States. It is a poor compliment to republican America that we are compelled to go to monarchical Europe to learn the very rudiments of agricultural science. *Agricultural Physiology* is important to the farmer, but no work on the subject was ever published in America, and but one in England, and that a poor book. Europe does not furnish text books adapted to the wants of an American institution.

It is far more desirable that scientific men should make *additions* to our knowledge, than labor to extend the present knowledge to the many. The discoveries of Liebig in practical chemistry created a greater amount of interest and resulted in more benefit than could be accomplished by a hundred teachers of *old facts*. The speaker regarded the increase of knowledge—that is, the development of new facts illustrative of agriculture,—as the point now to be pursued. And how is it to be done? He thought we should unite the highest scientific attainments in the country with the highest practical attainments among farmers. Bring the two together—have then work in concert. The man of science will go astray. Liebig generalized facts prematurely, and the result was he fell into error, and brought rural science itself somewhat into disrepute.

Experiments show that a plant takes but a very small portion of its food from the soil; it draws its chief nourishment from the atmosphere and water. Science has demostrated that one-half of the weight of all our agricultural plants is nothing but the elements of water, oxygen and hydrogen, and four-fifths of the other parts are carbon, or coal. Nine-tenths of the wood of plants are

water, which falls from heaven and cost nothing. What we want is to study the laws of nature so closely that we shall understand them perfectly, so that we can make one day's labor give us three times as much as it now yields. A seed, in growing, first takes in moisture. There must be a freedom of motion in the germ, and water gives that freedom; there is an absorption of oxygen, on the same principle as we inhale it into our lungs, and that combined with the carbon in the seed, really burns it and evolves heat. If a quantity of wheat is placed in a bin and water added, it grows hot. That heat is the commencement of vitality. If you plant corn on wet ground, prematurely, the ground being moist but too cold, if the seed starts to sprout it rots. If it do not, the roots descend in to the chilly ice water beneath, and are checked and the plant may die. This shows the connection between germination, the growth of plants and temperature. It had been supposed until recently that the growth of plants increased in proportion as the temperature was raised, but this opinion has been proved to be erroneous. Corn planted at a temperature 20 deg. above the freezing point in 48 hours gained three grains in weight; raising the temperature to 40 deg. above freezing, instead of gaining in the same length of time from three grains to six grains, it is found that the plant has grown as the square of the increased temperature; and increased to 12 grains. Therefore, the plant increases four fold more than the increase of temperature. The growth of plants is governed by fixed laws, and we should study and obey them.

Taking up the subject of *Agricultural Meteorology*, the lecturer remarked that he only wished to show that a scientific knowledge of the laws of nature has a direct bearing on everything done on the farm. Study the matter of temperature. Take the western shore of England. They cannot grow corn there, because the climate is too cold, but they grow wheat; yet if there happens a cold season, their wheat does not ripen. Last year the season was remarkably cold throughout western Europe, and the lecturer said he had prophesied that the crops would be short. He raised last year about 700 bushels of corn, but instead of selling it when ripe, he supposed this corn must be worth more, hereafter, because the season had been unpropitious in western Europe, and the crop there must be a short one; grain will therefore go up, whether there be war or not; that corn is now worth 90 cents to $1,00 per bushel. These laws, if understood, can be turned to a practical account, and if the farmers of this country should urge the Smithsonian Institute to turn its attention to agricultural meteorology, it would prove of great benefit to them.

Referring to the matter of making inquiries by letter for information on a subject was very unsatisfactory. Old facts are returned in plenty, but new ideas are not to be obtained. Take the dairy, for instance. He never could get an answer to the question "How much butter ought a thousand pounds of good timothy hay to produce?" or, "How much pork ought 100 lbs. of corn to produce?" Both of these questions are important, and might be easily settled, and so of others.

Agricultural engineering, too, demands attention. A good work on this subject is needed, and yet there is no one who has treated of engineering in connection with agriculture. We need to know how much water a piece of ground will contain, how much of it is evaporated, and how much absorbed by the plant. Land will evaporate 40 inches of water, where not 30 would fall during the year. Now if a man needs all the water that falls on his farm, why let it run off in the freshets? It may be retained to produce crops. The evaporation of water is a curious thing. It is done simply by the action of heat expanding the water and makes it lighter than the atmosphere. Solar heat is the true source of all the water power in the world. If there were no evaporation, there could be no streams flowing from the mountains. Sunshine is the great agent in causing plants and trees to grow, and is the source of all muscular power.

Sunshine sustains all the vital and mechanical power in the world. Farmers have not studied this power, and yet they can make it earn them money. The lecturer said he did not propose that every farmer should devote his life to such researches, but that a few of the best men of the nation should be employed for the purpose, while the farmer would reap the benefit. Will it be said that the State of Massachusetts cannot employ five men all their lives? Supposing each wants a salary of $3000 a year? that would be but $5,000 yearly expense. We are indebted to Europe for nearly all our scientific information; we have no agricultural science which we can call our own. He had more confidence in the action of Massachusetts in this important matter than in any other State because she has already done more for education.

Turning to *agricultural chemistry* and *geology*, the lecturer remarked that chemists have not generally been practical men, and have not looked at the subject from an agricultural point of view. They operate on 100, or perhaps 1000 grains, in making an analysis of soils, but he thought that amount too small. If he desired to ascertain the difference between the soils of western New York and Massachusetts, he would take a cubic foot of each.

It is a universal law of nature that all animals and plants give back to the earth and atmosphere an exact equivalent for the food which they consume. Supposing they did not, they would, by impoverishing the earth, finally become extinct.

Man is the only animal that impoverishes the land that feeds him. If you take a million bushels of wheat from Ohio and consume it here in Massachusetts, no equivalent is returned to the soil of Ohio for the matter taken from it, and the land is impoverished to that extent. The Erie canal conveys a million tons of nutritive matter from the lands of the West, where it carries *one* ton back to restore fertility. We are converting the most fertile lands in the world into a barren desert by this means; this is our *wisdom*.

Dr. LEE concluded his highly interesting lecture by asking why farmers, although in a majority in the country, did not do anything to elevate and improve their profession! His remarks were listened to with earnest attention, and at the close, Mr. PROCTOR, of Danvers, moved that the thanks of the Society be presented to Dr. LEE for his able lecture, which was seconded by Mr. SPRAGUE, of Duxbury, and unanimously carried.

The subject for the evening's discussion—*Farm Stock*,—was, on motion of Mr. PROCTOR, postponed until next Tuesday evening, when a lecture will be delivered thereon by Mr. HOWARD, of the *Boston Cultivator*, and the time of the meeting was taken up until the adjournment by a discussion of the subject of experimental farms, and agriculture generally, which was participated in by Messrs. PROCTOR, SPRAGUE, BROOKS, DODGE, BUCKMINSTER and Col. NEWELL, the Chairman. Dr. LEE also took occasion to say that by his remarks in regard to agricultural science in this country, he meant that we did not do anything to advance it, did not cultivate it as we cultivate the soil.

THE CULTURE OF ONIONS.

MR. EDITOR:—My success in raising onions has led many to ask "how it is done." They say the maggot and the large brown worm have been so destructive that they have done trying to raise that valuable vegetable. In answer to such inquiries permit me to reply.

There are at least six kinds of onions. But they are of the same species. The leek, the garlick, the hill-onions, the top-onions, the bed and the silver onions. From the fact, that whenever onions have been found growing wild, they are always found most plentifully and most flourishing in muck soil, I have taken the hint to prepare my onion bed with a plentiful supply of muck first put into the hog-yard, and then well mixed with common soil. If I plow the ground, I take care not to have the ground too light. As the roots of onions do not go down deep, they will not stand drought so well in light as in more common soil. Besides, onions bottom better where the ground has been rotted or hard trodden.

I cultivate the "top-onion," for several reasons. All black seed onions are slow to come up. The weeds get the start of them and then you are obliged to get down on your hands and knees and weed with your fingers. Then warm weather has come on and the maggot fly commences with the young plant and destroys it. And the black seed onion is so late that the black worm is just in season to bite off the tender stalk and so devours the onion.

But plant the "top-onion" seed, which is already a little onion, you may get them well growing in April. They come up immediately, so that you may hoe them twice or more before weeds appear. And before maggot or worm time, the onion has got the ground by possession. When the weeds appear, you may march right along with your hoe and go over with a bed large enough for twenty bushels, before breakfast.

The reason why maggots have ever destroyed the top-onion is, that they were planted too late. They should be planted as soon as the snow and frost disappears. Some put out in the fall and do well. I have never tried it. The top-onions on good ground are large as any. They are sweeter and more juicy than other varieties, and can be raised almost as easy as potatoes.

I have given away and sold seed for several years; and when the experiment has been fair, all have been satisfied. I intend to *give* away and sell before April, *twelve bushels of seed*. S. MORGAN.

Bristol, Jan. 13, 1854.

P. S.—Perhaps there is no vegetable more agreeable to the stomach of a dyspeptic, than fried or boiled onions.—*Middlebury Register*.

CONCORD FARMERS' CLUB.

THURSDAY EVENING, FEBRUARY 9, 1854.

Reports being called for, an excellent one on *Root Crops* was made by ELIJAH WOOD, Jr., and another by one of the members, which, being much shorter, we give in this connection, on

FARM BUILDINGS.

The first difficulty, and one which cannot ordinarily be overcome, in the arrangement and convenience of Farm Buildings, is the fact, that most persons enter upon the farm where the buildings are already constructed. They are too good, perhaps, to be pulled down, while they are not convenient in their location or arrangement.

He who enters upon a farm entirely free from buildings, ought to regard as the first thing, the convenience of their situation; and to this end must be considered the best shelter, feeding and watering of live stock; the carriage of the crop, and of manure, and the preservation of the produce. He will not, probably, be able to combine all these advantages, but must seek to obtain as many of them as possible.

The relative location of the several buildings to each other, is the second important consideration. I would not have them connected with each other, for several reasons: first, on account of health, as it is always difficult to prevent the odors arising from the styes, sink drainage and barn cellars from penetrating the dwelling. Second, on account of the liability of the loss of the whole by fire, if it chances to originate in any one of them. And thirdly, the impossibility of giving the dwelling that air of neatness, order and health, in all its

surroundings, when the out-buildings are compactly placed near the dwelling-house. But no general rule can be laid down as to how far apart the buildings should stand; that will depend upon various circumstances, such as the nature of the ground, the supply of water, and the particular kind of business for which they are to be used.

A moderately sized, but *well-finished* dwelling house, I should strongly recommend. A large house, partially finished, has an unthrifty appearance to the traveller, is cold, inconvenient and comfortless to the family, and is a reproach to the owner, if he planned it himself. There is one room, however, in the dwelling of every farmer, of which I will speak, because if he does not find comfort and convenience there, it is quite likely they will not be found on *his* premises anywhere:—that room is the kitchen—the place where cluster the family and the affections, as well as the bountiful products of the farm; it is not the outer court of home, but the centre of home itself, on the farm, and the index either of the prosperity or decay of its occupants. The kitchen should be ample in its dimensions, and supplied with all the nameless conveniences which are of more consequence than the aid of foreign "help." Dry wood and soft water are indispensable, and should be near at hand. In this climate, the kitchen should be on the south side, but protected from summer suns by shade or piazza. In such a kitchen the graces will bloom as well as the posies, and virtues will rise as well as the buckwheat cakes; the presiding genius, whether over the stove or over the tub, will be *good nature*, and the children will remember the dear old spot, where they first cracked jokes and nuts, or perhaps kissed a pretty girl while playing blind-man's-buff, as the sunny place of existence, and ever turn to it from the turmoil of life, with unabated delight.

The corn-crib or barn should be separate from the other buildings—but with this exception I would have all the others under one roof. The rooms for carriages, implements, &c., should be separated by tight partitions. Horses, oxen, cows and young cattle, should each have their particular places assigned. There should be a good cellar for roots under the barn, into which, if sufficiently large, the wagons and carts might be wintered. If I could avoid it I would have no manure under the barn. With such an arrangement, and the possession of a common share of philosphy and good nature, the farmer ought to be a happy man.

Mr. Jacob B. Farmer then presented a bottle containing some 30 or 40 worms, some of them half an inch in length, somewhat resembling canker worms, though not having the same motions. The head is black, the body of a brownish green, and sufficiently transparent to show an internal black spot in the centre of the abdomen; the belly paler than the back. The extremity or tail, light-colored and furnished with two horns above, and two feet by which that part was slightly raised when the worm was in motion. By lamp-light, we could discover no other feet, or stripes, either lateral or longitudinal. Mr. F. found these worms in large numbers on the snow, in a state of great activity, and not only upon the surface, but an inch or more below it. The snow lay upon a reclaimed meadow, the ground bare near it, but no trees or bushes within twenty rods. When we saw them, they had been confined eleven hours, but were still as active as are insects in June. What are they? Where did they come from?

The President then announced the subject for the evening's discussion, viz.:—*What are the best methods of raising, keeping, and feeding Poultry and Swine?*

Mr. C. W. Goodnow said the rearing of poultry had become fashionable, and he considered it a fashion which afforded many conveniences, as well as a pleasant occupation. He had instituted experiments with some degree of exactness, and found that it takes 4-5 of a quart of corn to keep a hen one week, making 1¼ bushels a year; hens, on an average, cost 37 cents, which makes the hen and keeping cost $1,62; a hen will lay on an average, 82 eggs, which, at 15 cents a dozen, will give $1,03 as income. Now add 37 cents as value of the hen, and you have a remainder of $1,40, making a loss of 22 cents on each hen.

But in order to illustrate the subject more fully, he had taken pains to call upon some of his young friends, who, he knew, were largely engaged in rearing poultry and kept precise accounts, for statements which would be more satisfactory than any he could make himself. In response to his inquiries, James A. Barrett has furnished him with the following statement:—

Sir,—At your request I have looked up my account of the expense and income of my fowls for the year 1853.

I commenced the year with ninety fowls; but in the course of the first nine months, I reduced them to thirty-five.

They laid during the year six hundred and sixteen dozen of eggs. I have raised about one hundred chickens. Their food has been mostly damaged corn and wheat, oats, sweepings of mills, meat, &c.

The receipts, including eggs, chickens, &c., after reserving enough to make up the original number of ninety, amount to	$157,71
Manure, or guano, estimated at	20,00
Making in all	$177,71
Cost of keeping	$106,95
Leaving a net profit of	$70,76

Mr. Barrett's statement, I think, is somewhat incomplete, and calculated to give too large an idea of the profit of raising hens. I would, however, recommend to every one who conveniently

can, to keep hens—by so doing they may have at nearly all times, chickens fit for the table, and fresh eggs. Another young man who is interested in the subject, has sent me the following account:—

Statement of the profits on poultry for the year 1853–4.

Received for 265 doz. eggs sold	$50,75	
" 36 pairs chickens sold	34,05	
March 1, 1854. On hand 46 fowls, worth 50 cts. each	23,00	$107,70
Expenses, for corn	$9,91	
" cobmeal	8,77	
" buckwheat, oats, meat, &c.	8,47	
On hand, March 1, 1854, 46 fowls, worth 42 cts. each	19,32	$46,47
Net gain		$61,23

Concord, March 9, 1854. J. B. BROWN.

Mr. JOHN RAYNOLDS said he thought Poultry and Swine comprised an important part of the farmer's stock; he spoke of the origin of fowls, of the value of different breeds, and thought those of a medium size, all things considered, are the most profitable, and our yellow-legged common fowls are not excelled by any for the table, and perhaps not for laying; he spoke of the amount of poultry in the Union as making an item of great national wealth, amounting to no less a sum than $20,000,000 annually! The State of New York alone had $2,373,000 value in this stock in a single year. The amount of sales of poultry at the Quincy Market, Boston, for the year 1848, was $674,423,00, and the eggs sold in and around the same market, during the same period, amounted to 1,129,735 dozen, making the amount paid for eggs at that market $203,-352,30, and the sales in the city for that year, not much short of $1,000,000. There are now many breeds of poultry among us, and many opinions respecting their qualities and profitableness. The larger kinds make a stately appearance, but are more expensive to keep, and I have strong doubts whether the quality of their flesh, or even their eggs is as good as of the smaller kinds. There are many of the *fancy breeds*, as they are called, that are quite ornamental, as well as valuable layers. *Most* of these, however, have blue or slate-colored legs which are generally objected to by epicures. The fowls most sought for at present are the *Brahma Pootra, Golden Poland, Bolton Grey, Black Spanish, White, Red, and Black Shanghai, Chittagong, and Cochin China.* Mr. Bennett, in his treatise on Poultry says there are four important requisites to success in the management of fowls—

1. That they have *ample space.*
2. Thorough ventilation.
3. Perfect cleanliness, and
4. A variety and sufficiency of good food and pure water.

Mr. JOHN B. MOORE, President of the club, said he believed the raising of poultry might be made profitable as that of any other stock or crop of the farm, according to the amount of capital invested in it. Fowls are also a pleasant feature of the homestead, one in which all the members of the family feel an interest, so that while they gratify by affording a pecuniary profit, they afford enjoyment by their appearance, social habits and attachments. A year or two since he erected a building for fowls and enclosed an ample space for them to range in and had taken pains to keep an exact account of profit and loss.

For the two months of January and February, 1854, he valued the fowls at	$37,30
Keeping the same	13,13
Use of hen-house	2,00
	$52,43
He sold 97 doz. eggs for	$24,25
Sold fowls for	7,35
Value of fowls on hand	36,90
Making	$68,50
Deduct cost	52,43
Leaving a profit in two months of	$16,16

These fowls had not had the range of the barn and yard, but were strictly confined to their own premises, for which reason he doubted whether they would show so favorable a return, as those would running at large, other things being equal. The average cost of keeping he had ascertained to be 3½ mills per day.

The question for the next evening's discussion is—*To what extent would ornamental gardening be made profitable to the farmer?*

For the New England Farmer.

A NEW KIND OF FENCE.

Dr. C. B. GREENE, of Windsor, Vt., has introduced into this region a process of kyanizing wood, with *blue* vitrol, so as to render it very durable. He takes stakes, (ash, elm, oak, or any suitable wood) 5½ feet long, and steeps 2 feet of the sharpened end till *thoroughly soaked* in a solution of blue vitrol. One lb. of vitrol to 40 lbs. water is his rule. These stakes are then driven firmly into the ground, about 15 inches. The tops are then brought into a straight line, and a strip of board 4 inches wide, placed upon the top of the stakes, and nailed with one nail to each stake. The stakes are 8 inches apart. Dr. G. affirms that after paying 24 *cents per rod*, or $2,40 per hundred, for his stakes, he can pay all other cost upon such a fence and hire it made at 26 cents per rod, or at 50 cents per rod, the whole cost.

By experimenting upon a piece of *basswood* board, 7½ years since, which he placed in the ground then, where it has remained perfectly sound to this time, Dr. G. is of opinion this fence will be very durable, and as its cost will be even *less* than 50 cents per rod, to farmers who can cut their own stakes, it must eventually be a very common kind of "dividing line."

Among Dr. G.'s advantages over common fence, he says cattle and sheep can't get through it, horses won't jump it, hogs will go a good distance round, rather than climb over it, and a *lazy man* can't set in the *shade* of it. G. F. NUTTING.

Chelsea, Vt., 1854.

For the New England Farmer.

WHAT A GARDEN SHOULD BE.

Having reviewed somewhat hastily the general innate love for gardens and their accompaniments, together with their benefit to man, it will be well before describing any form or forms to go back a little, and try to learn what has always constituted a garden. The first of which we have any knowledge, is the garden of Paradise, and whether a minute description would have been unworthy Holy Writ or not, we do not know anything of the arrangement of its surface; but as flowers and fruits were spoken of promiscuously, and as it was one of nature's own planting and arranging, it is not unreasonable to presume it was of the kind to which common consent has affixed the term natural, owing to the absence or concealment of art, in contradistinction to the artificial, where art is ever made prominent, and where we do not so much admire the beauties of nature, as the inventor's genius.

Man did not long possess this Paradise, and was obliged to make gardens for himself; at first, at least, he had too much to do to get his living to give any time to the beautiful, and consequently gardens are mentioned again only at a much later period. In later times there were the gardens of Babylon, with their pillars and terraces; here art was most distinctly seen; the natural and beautiful slopes were eschewed, and rather than see and own beauties of surface, and vegetation that were free to rich and poor alike, the Babylonian aristocrats mounted up in the air, on high pillars, terraces, which they covered with a few inches of earth, and managed to keep in a moderate state of culture and vegetation by unwearied care. Such gardens, doubtless, gave the city a very elegant appearance from a distance, but could be a source of personal gratification to very few. It is reasonable to suppose, that then, as now, wealth did not, by consequence, give an appreciation of the beautiful, and doubtless many happy cottagers had their little borders filled with beautiful flowers and rich fruits which gave to their hard-working owners more zest and pleasure, than all the luxury wealth could impart to its sated possessors.

Nor is the Bible the only book that tells of the gardens of antiquity: Homer describes the garden of Alcinous, which was to him the most magnificent affair the world could conceive. How magnificent we should have thought it, we can judge when we know it was a four-acre lot fenced in with a high green hedge, that enclosed a fruit, flower and kitchen garden, all mixed together; that it was laid out in straight lines and right angles, and enlivened with an occasional statue.

The Roman style copied closely the Grecian, with the addition of labyrinths of paths and trees, grottoes and caves, in rocks that were transported for miles to ornament the grounds; on the sides of the path were men and animals, cut out of box and yew trees, statues and fountains; and amongst the flower beds, round and oval fish-ponds; all as far as might be from the beautiful, luxuriant nature of Italy. They cared not so much to develope nature, as to display the evidences of their own wealth.

In later times we find the stately gardens of Versailles, and other European cities, uniformly modelled by the most artistic hand, and to a great degree copies of those I have described as Roman. It was reserved for England to sublime out of the whole mass of artificial gardening, a truer and more natural style.

I have not attempted to give the exact steps, or to delineate all the varieties of gardens and gardening; but to show how slowly man progressed, after being ejected from Paradise, to the true appreciation and reproduction of the best natural effects.

But few are insensible to the beauties of flowers and trees, or the grander charms of the widespread landscape, combining mountains, hills, valleys forests, rivers, lakes; or the quiet seclusion of the narrow dell, or the harmonious combination of grass and trees; and as men became more accustomed to analyze their likes and dislikes, and the reasons for seeking or neglecting certain objects capable of giving pleasure or its opposite, they asked themselves why they still went to the woods and fields to admire nature, and revel there in her beauty of color, and luxurious *abandon*, and yet produced at enormous expense in their cultivated grounds nearest home, and most often to be gazed upon, the very opposite of that they so much loved; and why they might not rather have just these natural charms for the same money, and be enabled to enjoy at home, what otherwise they must seek abroad.

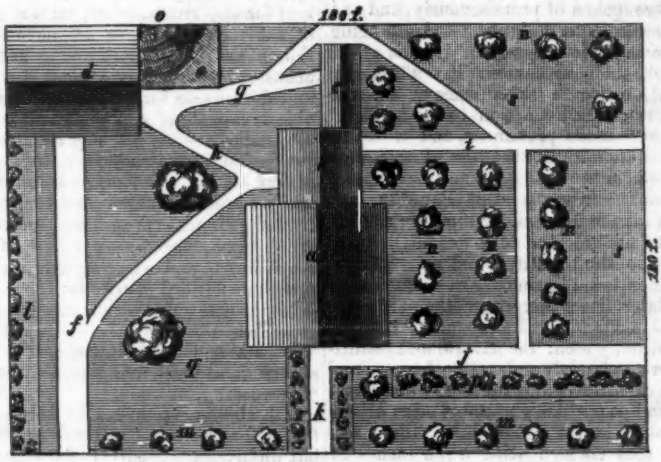
Such a spirit soon introduced a more rational system of things, and founded the natural style of gardening.

All who have followed me in my narrative thus far, will agree that this result was very desirable, but unfortunately only to be enjoyed and practiced by the owners of extensive estates; and they particularly who have but a small piece of ground adjoining the house to be devoted to flowers and ornament, whilst they admire the change, will deplore the necessity which from narrowness of boundary, condemns them to the right-angular and rigid in lines, and the systematic and precise in matters of ornament. Here it will be best to pause a little on the reasons for preferring one or another kind of improvement, before giving any special directions regarding the most desirable changes.

First, it is especially necessary not to confound the idea of beauty with *any* mere conformation of lines and figure; too many who have become dissatisfied with the system of right angles and straight lines have fallen into the opposite extreme, and now twist and turn their paths and walks for no good at all, till they become more ridiculous and disagreeable than the straight. Remember that a chief element of beauty is fitness, and that nothing can compensate for its absence. Instinctively the mind associates the idea of paths with getting somewhere; now if any path seems bent here and there at will, by which the distance is prolonged, the effect is disagreeable; but if it evidently tends to avoid an elevation, a group of trees, or any other natural obstacle, it is at once agreeable and praiseworthy, and if the arrangements on either side are such as they should be, the change for the most direct route is not noticed. Deception is at all times unworthy, but to get the greatest amount of pleasure and beauty is not deception, and if any path or wood is deflected to gain either, no argument based upon deception is applicable.

I am aware that the natural system, *as it has been abused*, has met with much disfavor, but where easy, flowing lines have been substituted for the rigid, straight and stiff, particularly if accompanied with proper ornamentation, the change is *not unpleasant*, it will even be *specially agreeable*. As the proprietors of small places are the most troubled to arrange their pleasure grounds consistently with correct ideas of beauty, I shall treat of the arrangements befitting the grounds of village homes: and the immediate surroundings of the farm-house, first; *because what is true of them, will be of country residences and park-like grounds*, on a large scale, and *vice versa*. As botany teaches, the leaf is the type of the tree.

I subjoin an imaginary plan of the surroundings of but too many homes in New England villages, *as they should not be, but are*. I wish to show particularly, *the farmer* and *mechanic*, that they may have *beauty, elegance and comfort, at the same cost with stiffness, awkwardness and discomfort*.



Village Homestead as it is—Unimproved.

a. House.
b. Kitchen.
c. Woodshed.
d. Barn.
e. Pig-sty.
f. Main Carriage Road.
g. Path from Shed to Barn.
h. Path from Kitchen to Barn.
i. Path from Kitchen to Garden.
j. Path from front door to Garden.
k. Path to front door.
l. Border of Currant Bushes.
m. Dilapidated elms in front.
n. Rows of Apple trees.
o. Manure heap.
p. Gooseberry border.
q. Grass.
r. Flower Border.
s. Kitchen Garden.

The above wood cut represents a village homestead, hundreds of which, of the same size and shape, or slightly differing, are familiar to all. The land itself is half an acre in size, on which is a house 40 feet square, with L and woodshed of proportionate dimensions; there is also a barn, 40x30; at one corner of the barn, *o*, is a large pile of manure exposed to the washing and beating of wind and rain; this manure-pile is surrounded by the hog-pen, whose squealing and noisome inhabitants are plainly perceivable by all.

The buildings are all more or less painted; probably white in front, and bright staring red on the back and sides; in some places there are blinds, but in more none, and probably the barn doors are swinging in the wind. Every path is straight, and if it is inconvenient to go around the corners, another path is worn across the grass. *f*, is the road up to the barn; this road is shut from the main street, by either a pair of bars, or a three-barred gate, generally halting on one hinge. *k*, is the path to the front door, which also is closed by a gate, commonly composed of pickets, one or more of which are askew, or broken out. *h*, *g*, *c* and *j*, are paths through the garden and grass, to and from the house and barn; in every case it is necessary either to go around a long and awkward corner, or cross grass or plowed land to the detriment of all concerned. *m*, is a row of half-starved elms, from the woods, or perhaps of overgrown and neglected apple trees—affording more suckers and canker worms than apples. *s*, represents the tillage by dotted lines. *q*, grass by straight lines. In the grass at the west of the house are perhaps two large elms or other fine trees, which have most likely been disfigured by a barbarous course of scraping with the fruit tree scraper, and a coat of whitewash. At *n*, *n*, we have apple or other fruit trees, all of which indicate the absence of a true horticultural skill, and in too many cases, of even the wish for anything better. On the west side is a long picket fence, out of which many slats have been lost, thus accommodating the neighbors or the proprietor's pigs and hens in their friendly visits. Very likely, in homesteads of the better order, the front will be protected by a light, white paling, in perfect repair, and finished at an expense of needless carpenter work, sufficient to

other fences in order. Against the fence on the W. N. and E., there will be, probably, a row of moss covered currant or gooseberry bushes, or perhaps raspberries. On either side of the front walk, *k*, are two borders, *r*, *r*, for flowers, which in some cases will have a few stunted roses and pinks, and perhaps a few roots of phlox or other perenials.

The border, *p*, is filled with some berry fruit, and the whole tilled surface will be more or less covered with fruits, vegetables, *and most of all, weeds*.

I do not mean to say that this is the only arrangement that would be seen in such a place, for many would evince care and neatness, but I doubt not, many of my readers will have recognized the very place I have been describing, before getting thus far. So much for the unimproved; the next time, I will describe the same place altered by the hand of care and taste.

I have selected a square half-acre from the general habit of cutting up village lands into rectangular shapes, and of course my description and strictures apply equally well to other homesteads of any size and shape, which are managed in the same careless and short-sighted manner.

R. Morris Copeland.

EXTRACTS AND REPLIES.

PRICES OF CROPS IN OHIO.

Corn is selling at this time and place at 40 cts —wheat at $1,25—rye 50 cts.—clover seed, $4,75 a bushel—oats 25 cts.—timothy seed, $2,00—flax seed, 80 cts.—potatoes 50 cts.—apples, green, 50 cts. per bushel—hogs, gross, $2,50 per hundred.

Hiram O. Minich.

Bucyrus, Crawford Co., Ohio, March 7, 1854.

ASHES—HOLD-FAST IN CATTLE.

New Subscriber, *Derby, Vt.*—The *hold-fast*, on cattle, is supposed to be occasioned by the old teeth being retained when the new ones are starting, which causes the new teeth to grow out of the side of the jaw. Make an examination, and see if something is not wrong with the teeth. Bathe the parts externally with arnica water.

Ashes spread broadcast on grass lands will prove highly beneficial. Apply them to corn around the hill at the first or second hoeing; scatter them about your apple trees—they are valuable on any crop.

HOW TO APPLY GUANO.

B. L. *Gilford.*—For corn, spread 300 pounds to the acre and harrow in, after pulverising and mixing with any moist loam; or, if you use other manure, apply a handfull of the mixture to the hill before dropping the corn. For grain crops, broadcast and harrow under. For grass, broadcast, and use in a rainy day, early in April. It is more pleasant to use it when mixed with loam

PERENNIAL RYE GRASS.

Jesse Eaton, *Meredith Village.*—The grass you sent is probably the perennial rye grass, though we had not enough of it for examination to feel quite sure about it.

HEMLOCK FOR HEDGES.

H., *Forestville, Ct.*—"Is hemlock of any value for hedges, either for ornament or for making fence?"

Hemlock makes a highly ornamental hedge, when well kept and trimmed. We have never known it used as a fence, and doubt whether it would offer a sufficient resistance against cattle. In transplanting, young and thrifty plants should be used, and their roots, after having been carefully taken up, should not be exposed for a moment to the sun and wind. From the ground, set them at once into wagons or boxes, and cover the roots with light earth, or damp straw or hay, where they should remain until the ground is ready to receive them.

LARGE EGGS.

James A. Barrett, *Concord, Ms.*—"The two eggs enclosed weigh ¼ of a pound each. These, and one more, weighing three ounces, were laid by one of my Shanghai hens in four days. I have found a number since supposed to have been laid by the same hen, that weighed about three ounces."

R. W. Ames, *Roxbury, Mass.*, informs us that he succeeded in raising, last year, 5170 grains of good sound corn from a single kernel planted!

GUANO.

J. H. A., *Fairhaven, Mass.*—Guano is selling now at $55,00 a ton—$2,75 per hundred pounds. There is no necessity for mixing guano with sand or loam, when you are to sow it broadcast, so far as the crop is concerned; but it is more comfortable sowing it. Apply the manure to your plain lands, by all means, in preference to the guano, if you can obtain an ox-cart load for fifty cents, as you suggest. With manure at that price you can raise any crop you please, within reasonable limits.

MEADOW MUD.

Dear Farmer:—Please inform me through your next number, the best way of preparing *meadow mud* for a manure for light upland loam.

A Subscriber.

See *Monthly Farmer*, vol. 5, pages 61, 340, 341. Meadow mud that has been dug out and exposed through the winter would be a good fertilizer, and one which all crops require. The "way of preparing" is simply to make the whole fine, and mingle intimately by turning the heap over.

CONCORD GRAPE—SWEET POTATO.

N. C., *Eden, Me.*—We shall give a full account of the "Concord Grape" in another column, stating price and where it may be purchased. The *sweet potato* is raised in this State and in the southwest part of New Hampshire. The slips may be obtained in the market at Boston, or you may sprout the potato in a hot-bed yourself. The slips should be set about the first of June, same as you transplant cabbage plants. They are very hardy.

MURIATE OF LIME.

"Is not Mr. Gould's advertisement of muriate of lime, an error, which recommends 300 *barrels* to the acre? One would think that a pretty strong amount, and if not very cheap, rather expensive as a dressing C. C. C.

Chester, Conn., Feb. 7, 1854.

Read 300 *pounds*, instead of barrels.

NITRATE OF SODA—BURDEN GRASS.

To J. W. WEBSTER, *North Fairhaven, Mass.* The price of "Burden grass," per bushel, is $1,-50—there is very little in market. After making inquiries at several places, where similar articles are sold, we could find no "nitrate of soda," at any price.

A HALF SUFFOLK PIG.

SAMUEL ALDEN, of *Lyme, N. H.*, killed a pig eight months and twenty-two days old which weighed when dressed (exclusive of rough lard) 401 pounds! R. C. B.

Orfordville, 1854.

OLD COLONY SWEET CORN.

R. O. STODDARD, *Westfield, Vt.*—"I planted this kind of corn last year on the 16th of May; it was in silk the first of August. Gathered some for the table on the 4th of Sept.—the stalks were large and some of them ten feet high, many of the ears being 6 feet from the ground. There being no frost until the last days of Sept., it came to maturity. As an experiment, I pulled the suckers from two rows, and I thought the ears were better and earlier for it, notwithstanding some say 'don't sucker your corn.'"

BEST SEED SOWER.

E. S. ALLEN, *Jacksonville, Vt.*—"You will confer a favor on a subscriber, and others, by informing them through your very valuable paper, which is the best Seed Sower, now used for sowing carrots."

The best Seed Sower with which we are acquainted is one represented in Messrs. Ruggles, Nourse, Mason & Co.'s Catalogue, and called "Seed Sower No. 2." The brush and cylinder of No. 2, which distributes the seed, go by graduated rows of iron cogs or gearings, which operate simply and uniformly, are durable, not likely to get out of order, and by which the speed of the dropping may be increased or lessened, and large or small seeds sown, in all their varieties, at any desirable distances, in hills or drills. There is a larger kind for use by horse power.

E. INGHAM, *Lebanon, N. H.*—See vol. 4, page 108, *Monthly Farmer*, for an excellent article on *the buckthorn*. There is no difficulty, whatever, in cultivating it. Buckwheat or clover may be turned in green, with great advantage, on the light lands you speak of.

IMPROVED POUDRETTE.—This article is advertised in our columns. We know nothing about it, never having used it. It may be easily tested by the purchase of a barrel or two for trial.

For the New England Farmer.

CITY RAILROADS—A MODEL STABLE.

BY HENRY F. FRENCH.

One would hardly expect to find in the midst of a great city, much that would be of value to the practical farmer, but during a day lately passed in New York, I chanced to ascertain some facts, which seem worth placing on the record.

By invitation of JAMES S. LIBBY, President of the "Sixth Avenue Railroad Company," which runs from Barclay Street, just in the rear of the Astor House, to Forty-fourth Street, a distance of three and a half miles, I passed over the road and visited the stables of the company, where are kept the *four hundred* horses, which draw the cars, in which are conveyed annually, for greater or less distances, *five and a half millions* of passengers.

City railroads are much discussed, now, both in Boston and elsewhere, and probably some statistical information on the subject may not be uninteresting. Again, the exact amount of food required for each animal, and the amount of labor he can endure, ought to be known to every farmer, but unfortunately, the man who cuts his own hay, guesses at the quantity, and lets the boys feed it out, without weight or measure, is not in the precise position to inform us of the expense of supporting his live stock, and on the farm, labor is too irregular to furnish much information as to the capacity of animals for work.

The human force of the company referred to, consists of sixty drivers, sixty conductors, one man for each sixteen horses at the stable, eight blacksmiths who do the shoeing for the whole, besides harness makers and painters and a few others.

The stable is of brick, two hundred feet square, and two stories high, with an attic. The two stories are occupied by the horses, which are led up to the second story, over an inclined plane. The attic is occupied as a hay and grain room, and one old horse, which seemed nearly blind, probably because, like the fish in the Mammoth Cave, there was nothing to see in that position. This individual amused himself, and served his race, by working a horse power hay-cutter, with which, in seven hours daily application, he is able to supply the wants of his four hundred brethren in the lower regions. The philanthropists of the great city, who labor so zealously for their fellows, and seem to make so little progress, I think may gain courage, by contemplating the example of this patient quadruped. Although constantly striving forward, he has never advanced a single inch, but he is accomplishing a vast deal of good by his efforts in the right direction. Water is brought by an aqueduct into the attic, as well as the other stories, and all the food is prepared by mixing the chopped hay with corn meal, and wetting it in one large box. It is then dropped, through wooden conduc-

tors, to the lower floors, and distributed to the various stalls. Every part of the establishment was perfectly clean, and kept in thorough order. Mr. WILLIAM EBBITT, the superintendent, who knows, by the way, as much about horses, as any man in New York, has his various troops under as good discipline as a military academy. A fine of one dollar is imposed upon every ostler who leaves a bucket or shovel in sight, when not in use, and I think more dirt may often be found in one stall in a farmer's barn, than could be scraped together from the whole establishment. But five horses were, at the time of my visit, disabled from work, of the whole number, and only seventeen have died in two years past. Their average allowance of food is one hundred pounds, or two bushels of meal per week, and about *eight pounds* of hay per day, for each horse, and yet they are all kept in the finest condition. A car, drawn by two horses, and with seats for twenty-eight persons, leaves the stable every two and a half minutes through the day. The time allowed *down* is thirty-eight minutes, and *up* forty minutes, and notwithstanding the difference in the number of passengers who stop the car to get in or out, at any point on the route, the time of running seldom varies one minute. Each team runs three times down and back, daily, making for every horse twenty-one miles a day, at once without unharnessing. Forty cars are employed, costing about $850 each; and Mr. EBBITT informed me that the cost of the horses varied from eighty-five to a hundred and forty dollars, each. Occasionally, by mistake they purchase one which proves to be worth four or five times as much, and when that fact appears, the horse is fitted for the market and sold for a higher sphere of action.

Mr. EBBITT showed me one specimen of the genus *horse* which is worthy of a place in Barnum's museum. It is a mare of full size, without a hair to cover her nakedness, not even by way of mane, tail or eyelashes. She is of a mouse color, fat and well formed, and at a little distance would pass for a sleek-haired animal, were it not for her perfectly ridiculous looking tail, which in grace and proportions, resembles that of a cleanly dressed porker. They say she "was ever thus since childhood's hour," and has had two colts of the same style of beauty. It strikes me that a few bottles of Bogle's Hyperion Fluid might be used on her with a fair opportunity to test its merits.

The forty cars run each eleven trips a day, making in all something more than three thousand miles of travel.

The cost of constructing this route with a double track, and of equipping it with cars, horses and harnesses, together with the real estate, was something more than seven hundred thousand dollars, and the stock has thus far paid ten per cent. dividends annually.

The only waste noticed about the establishment, is in the management of the manure, a great part of which passes off in liquid form into the river, while the remainder is sold for $1000 a year, not more than one-third of what should be received, according to the number of horses.

As a model city railroad, with the best President and Superintendent that can be produced, the former by the way a New Hampshire man, I think this company is worthy a more particular notice than a very hasty visit enables me to give.

H. F. F.

Ladies' Department.

BREAD-MAKING.

We shall not presume to instruct our fair readers in the art of bread-making. The process, however, involves some scientific principles, which we propose to explain, in continuation of our series of familiar remarks on chemistry. Wheat flour contains two principal ingredients, *gluten* and *starch*, besides a small per cent (4-100 to 8-100) of sugar. The outside of the kernel of wheat contains a larger proportion of gluten than the finer flour. These two parts of the flour may be separated easily by enclosing a little flour made into a stiff paste, in a linen bag, and kneading it in a basin of water, until the water that comes through is no longer white. The starch by this process escapes from the bag, and the gluten, a tough, adhering mass, remains within. Many ladies have noticed the different kinds of flour, in the ease with which it is kneaded. The tougher kinds contain the most gluten. The bakers prefer the latter sort, because it admits of more raising.

If flour were simply mixed up with water, and baked without raising, it would make a very close, indigestible and unpalatable bread, hardly worthy of the name. To become soft, light and palatable, the dough must be raised. This is effected, ordinarily, by one of two common processes. In making what is generally known as raised bread,—improperly so distinguished, because all bread is raised either before baking or in the process,—the dough is made up with water only, it ma- be, and a small portion of yeast, which is to act as a ferment. In the making of cream-of-tartar or sour-milk bread, the means of raising it are different and act in a very different way, chemically. In the first, the fermentation of the yeast or leaven is extended to the mass of fresh dough. The decomposing gluten acts upon the sugar and resolves it into alcohol and carbonic acid gas. This gas, in the form of little air bubbles, is disseminated through the loaf, and expands or raises it, being prevented from escaping by the glutinous nature of the dough. The alcohol formed by the fermentation is expelled from the dough by the heat of the oven. It has been collected sometimes, in large bakeries,—but hardly pays for the trouble. The dough sometimes becomes sour before baking, in consequence of a second fermentation—the acetous—by which the alcohol is converted into vinegar, on the absorption of oxygen from the air. It then becomes necessary to introduce into the dough some alkaline substance, as soda or salera-

tus, which unites with and neutralizes the acid, and makes the dough sweet again.

In the second kind of bread, named above, the carbonate acid to raise it is obtained from the carbonate of soda, or of potassa, (saleratus)—by mixing with it in the flour some acid, as sour milk, cream of tartar, or cider or vinegar or hydrochloric acid—either of which, by its stronger affinity for the alkaline base—the soda or potassa—unites with it and liberates the carbonic acid. We see that by this mode of raising the bread, the sugar of the wheat is retained in it; whereas by the other process it is converted into alchohol and carbonic acid. We see also that the use of soda or saleratus is very different in the two kinds of bread-making. In the first, the alkaline base is required to neutralize the acetic acid,—in the second, the carbonic acid is needed to raise the bread. In each case a neutral substance is left in the bread; in the first, an acetate of soda—in the second, a base of soda or potassa, united with whatever acid is used.

Bread when baked is neither starch nor gluten. The globules of starch which remain unbroken in the flour, swell and burst under the influence of the moisture and heat, and with the gluten unite chemically with the water of the dough and form bread. No separation of the starch and gluten can be effected after baking. Even a portion of water chemically united with the bread can not be separated from it by evaporation. The hardest and driest bread has water combined with the flour.

Gluten is the most nutritious part of the flour. The bran, therefore, should not be excluded from the bread, if we have regard to its highest nutritive qualities.

The crust of bread, when moistened and returned to the oven, becomes smooth and shining. A portion of the starch, in the process of baking, is converted into gum. This gum on being moistened spreads over the surface of the bread producing the smooth surface, and also giving the crust a taste which the bread does not have. Corn bread has a peculiar aromatic flavor, owing to an oil which is disseminated through the meal. The inferiority of meal long ground, to that which is fresh, is due to the change which exposure to the air has made in these oily particles.—*Portland Eclectic.*

South Down Sheep.—Can you or some of your numerous subscribers inform me through the pages of the *Cultivator*, where I can get the full blooded South Down Sheep, and what they will cost a pair!—S. D. *Jefferson Co., Ind.*

South Down Sheep can be procured of L. G. Morris, Fordham, Westchester county, N. Y.; Col. J. M. Sherwood, Auburn N. Y.; Z. B. Wakeman, Little Falls, N. Y.; and several other breeders in this State. The prices vary from $20 to $100 or more per pair, according to quality.—*Country Gent.*

Connecticut State Agricultural Society.—Officers for 1854.

Samuel T. Huntington, Hartford, President.

John A. Porter, New Haven, Recording Secretary and Treasurer.

ADVERTISING DEPARTMENT.

☞ A limited number of advertisements of an appropriate character will be inserted in the monthly Farmer at the following

RATES.

For one square 15 lines, one insertion.....$1,00
For each subsequent insertion.....50

☞ The above rates will be charged for all advertisements, whether longer or shorter.

Walnut Grove Nursery.

NEWTON CENTRE, MASS.

The subscribers have on hand as usual a large stock of Fruit and other Trees, which they are prepared to sell at very reasonable rates. Among others, Apple, Pear, Cherry, Plum, Peach, Grape Vines, Raspberries, Blackberries, &c. &c.

Also, Ornamental Trees, Shrubs, Roses, Herbaceous Roots, Creepers, &c. &c.

A splendid lot of Sugar Maple, 8 to 10 feet high, $30 per hundred.

6000 Apple stocks, $10 per thousand.

5000 Buckthorn, 2 to 3 years, $15 to $20 per thousand.

Large and fine Norway Spruce; Arbor Vitæ for hedges and standards.

Fine lot Red Dutch Currants, $6 per thousand.

Scions will be furnished, if ordered early.

Other things too numerous to mention. All orders will be promptly attended to, and the trees securely packed, when desired, for which an extra charge will be made. Catalogues sent to post-paid applicants. All packages delivered in Boston free of expense.

JAMES HYDE & SON.

Newton Centre, March 18, 1854. w*tf

R. M. COPELAND,

Landscape and Ornamental Gardener,

Will furnish plans of Cemeteries, Public Squares, Pleasure Grounds, Gardens and Farms, with directions for their laying out and improvement, also for the construction of every species of buildings connected with Horticulture or Agriculture, Barns, Green-Houses, Conservatories, Rustic Arbors, &c., whether for use or ornament.

He will furnish lists of the most approved and desirable ornamental and useful Trees, Shrubs, and Flowers; also, plans and estimates for every species of underdraining, and will contact for and superintend the removal of trees of every size under fifty feet, at all seasons of the year.

Refers to—Hon. M. P. Wilder, Dorchester.
" S. H. Walley, Roxbury.
" Samuel Walker, Roxbury.
" J. W. Edmands, Newton Centre.
Prof. H. W. Longfellow, Cambridge.
J. W. Proctor, Danvers.
Simon Brown, Ed. of N. E. Farmer.

R. M. C. may be addressed Box 326 Boston Post Office, and No. 3 Dudley Block, Roxbury.

March 25, 1854. cow5t*2

To Farmers.

The subscriber is now prepared to receive orders for the Improved Poudrette. It has been manufactured under the advice of some of the best agricultural chemists in the Country, and is now commended to the public as the most certain and cheap Fertilizer that can be obtained, acting favorably on all crops, and on all soils. Six different articles are used in its composition, which combined make it a perfect manure for every crop raised in New England. It is finely adapted to corn, and the present and prospective high prices of this indispensable crop, ought to induce all farmers to increase the quantity planted, which they can do profitably by using the Improved Poudrette.

Prof. Mapes says of it, "no farmer using it once, will be willing ever to dispense with it." I raised corn with it the past season at a cost of less than 40 cts. ℔ bushel. Price in Providence $1,50 ℔ bbl., cash. It can be obtained of Messrs. PARKER & WHITE, 59 & 63 Blackstone Street, Boston.

T. B. HALLIDAY,
13 West Water Street, Providence, R. I.

Feb. 25, 1854. 3mo*

Fruit and Ornamental Trees.

The proprietors offer for sale an extensive assortment of fruit and ornamental trees, comprising all the choice standard varieties, for the Garden or Orchard; also Currants, Gooseberries, Grape Vines &c. 1000 Buckthorn and Arbor Vitæ for Hedges.

S. & G. HYDE.

Newton Corner, March 18, 1854. w*tf

Valuable Potatoes for Sale.

POTATO ROT.—A REMEDY BY WISE IMPORTATION AND REPRODUCTION!

THE subscriber offers the following valuable varieties of potatoes for sale. The N. Y. State Agricultural Society have generously encouraged their importation and culture.

1st. THE ROUGH PURPLE CHILI. This was imported at a great expense from South America, in 1851, and was the only sort out of eight adapted to our climate. For *hardiness, yield, and quality for the table*, it has no equal. Seventy-five small parcels of it were widely spread, in 1853, over twelve Northern States. From more than one third of them, embracing nine States, reports have been received. These reports, notwithstanding the unfavorableness of the season, usually show a yield varying from twenty to sixty pounds, from one pound planted. But *two* cases of disease have been reported, one from Mass., and one from N. Y., both in circumstances of very unfavorable culture. The adaptation of this variety to the varying soil and climate of our country is such as to render it superior to any now cultivated. Price $8 ℔ Bushel.

2d. SEEDLINGS OF THE ROUGH PURPLE CHILI. These were derived from the seed-ball of the preceding, in 1852. They present a considerable number of varieties. They have been chosen by three successive selections, from nearly eight hundred varieties, so as to secure hardiness, the best yield and fine flesh. In season of maturity many of them, and in color and shape the most of them, exceed the parent. They are now offered to the public, after a most laborious and costly cultivation, in the fullest confidence that they will make an addition of valuable sorts to those now in use, such as have never before been made. Connected with them are some other sorts of the same age, and equally valuable, and similarly selected from three other families. Many of these seedlings were widely tested the last year, in connection with the Rough Purple Chilis. ☞ Those varieties of these seedlings which are TOO LATE for the Northern States, have been expressly selected for the South. Price $8 ℔ Bushel.

☞ Each parcel ordered will be safely packed and directed to the purchaser by Railroad, or Express, as directed, and at the expense and risk of the purchaser. No package failed last year to reach its destination.

☞ Dealers will be allowed a discount of twenty-five ℔ cent.

☞ Purchasers who take parcels from my house and pack for themselves, will be allowed twenty-five ℔ cent. discount.

☞ All orders answered *for cash* only.

RESIDENCE, near the State Lunatic Asylum.

CHAUNCEY E. GOODRICH,

Utica, N. Y., Feb. 10th, 1854.

References.

The following persons are acquainted with these potatoes, having all cultivated them the last year:

D. A. Bulkley, Williamstown, Mass. A. S. Mitchell, Farmington, Conn. A Bradley, Whitestown; H. H Eastman, Marshall; Dr. H. P. Hays, Wyoming; J. W. Briggs, West Macedon; M. P. Covert, Schenectady; Sam'l Buckingham, Poughkeepsie, N. Y. R. L. Colt, Patterson, N. J. R. C. Walker, Elizabeth; Jas. S. Negley, and Jno. Fleming, Pittsburg, Pa. J. C. Holmes, Detroit, Mich. B. Murray, and H. L. Brush, Ottawa; Rev. G. W. Gale, Galesburgh, Ill. D. D. Cathcart, Bristol, Ind. A. C. Isham, Madison, Wis.

March 1, 1854.

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The entire cost being only ONE DOLLAR.

The People's Journal was commenced in November, 1853, and has already attained a large circulation. The November Number contained 40 engravings, the December Number 72 engravings, the January Number 47 engravings, and the February issue has 61 engravings, making in all 220 illustrations, although only four numbers have been published. These relate to Science, Art, Mechanics, Agriculture, and Useful Knowledge, in accordance with the general plan of the work. No publication of the kind has ever been produced with such magnificence or at so cheap a price. It is admired and taken by every one who sees it

TERMS.—To Subscribers—One Dollar a Year, or Fifty Cents for Six Months. Subscriptions may be sent by mail in coin, post office stamps, or bills, at the risk of the publisher. The name of the Post Office, County and State, where the paper is desired to be sent, should be plainly written. Address, postage paid,

ALFRED E. BEACH,
No. 86 Nassau Street, New York City,
Editor of the People's Journal.

A LIBERAL DISCOUNT TO POST MASTERS AND AGENTS.

Single copies 12½ cents. Specimens sent on receipt of four postage stamps.

Feb. 4, 1854. 4w4*

Highland Nurseries, Newburgh, NEW YORK.

A. SAUL & CO., in inviting the attention of their *patrons* and the public in general, to their very extensive collection of *FRUIT AND ORNAMENTAL TREES, SHRUBS, &c. &c.*, would respectfully inform them that the stock which they offer for sale the coming spring is unusually fine, both as regards quality of trees, variety of kinds, &c., &c.

The soil and climate of our Hudson Highlands have rendered proverbial the success of the trees sent from here to all parts of the union, and the accuracy and precision so indispensable in the propagation of fruit trees, for which this establishment has long been celebrated, render errors in nomenclature of rare occurrence.

They have propagated in large quantities, all the *leading standard* varieties, which are proved best adapted for general cultivation, especially those recommended by the American Pomological Society; as well as *novelties* of both *native* and *foreign* origin.

To particularize within the limits of an advertisement would be impossible; they refer to their general catalogue, a copy of which will be sent to all *post-paid* applicants, on enclosing a post office stamp.

The following comprises a portion of their stock, and are all of fine growth, viz:

Pears in over 400 varieties, both standards on their own stock for orchard culture, and on the Quince for Dwarfs, Pyramids, and Quenoucle, for garden culture.

Apples in over 300 varieties, both standards and dwarfs; also, Cherries, both standards and dwarfs; Plum, Apricot, Peach, Nectarines and Quince trees in every variety.

Grape Vines, (both native and foreign, for vineries;) also, Gooseberries (50 best Lancashire varieties.)

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Feb. 11 1854. 1w*April

CONTENTS OF THIS NUMBER.

Calendar for April.....Page 153
Is it Profitable to Fatten Swine in New England.....155
Pruning Orchards.....157
Where Does all the Corn go to.....159
Bee-Culture—No. 3—The Bee and the Cricket.....160
The Concord Grape—Error in Judgment.....162
Improvement of the Dairy.....163
Seventh Agricultural Meeting.....164
Garget in Cows—Improved Super-Phosphate of Lime.....166
The Seasons—Farming in New England—No. 3.....167
Solid and Liquid Excrements of Animals.....168
How to Make the Butter Come.....168
Improvement of the Dairy—My Country Home.....169
Milk and Butter Cows—Song for the Seasons—Buffaloes.....170
Spirit of the Agricultural Press.....171
How I saved my Currant Bushes.....172
Carrots for Horses, Milch Cows, &c. &c.....173
Does Cold Kill the Peach Trees.....173
Carrots vs. Corn—Farm Implement Fair.....174
The "Apple Man's" Story.....176
Farms Improved by Keeping Sheep.....176
United States Agricultural Society.....178
Guano Factory.....179
Home Ashes—Experimental Farms.....180
Soaked Corn for Horses.....180
Eighth Agricultural Meeting.....181
Agriculture in Massachusetts.....183
New use of Plaster of Paris.....183
Ancient Spinning Wheel—Our Country's Area.....184
Feed of Stock.....184
Country Farmers and City Mechanics.....185
Tenacity of Life.....185
Cheap Experiment in Decomposing Bones.....186
Profits of Sheep.....186
Cooked and Uncooked Meal.....187
Ninth Agricultural Meeting.....187
The Culture of Onions—Concord Farmers' Club.....190
A New kind of Fence.....192
What a Garden Should be.....193
City Railroads—A Model Stable.....196
Bread-Making.....197

ILLUSTRATIONS.

Wells' Patent Grass Seed Sower.....159
The Concord Grape.....161
Steel Double Plow.....177
Village Homestead as it is—Unimproved.....194

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